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     (FILE 'HOME' ENTERED AT 10:58:37 ON 24 SEP 2008)

     FILE 'REGISTRY' ENTERED AT 10:58:48 ON 24 SEP 2008
L1             STRUCTURE UPLOADED
L2              68 S SSS L1 FULL

     FILE 'CAPLUS' ENTERED AT 10:59:12 ON 24 SEP 2008
L3             117 S L2
                   E KIDNEY+ALL/CT
                   E NEPHRITIS+ALL/CT
                   E GLOMERULONEPHRITIS+ALL/CT
L4               4 S L3 AND (KIDNEY OR RENAL OR NEPHRO? OR NEPHRITIS OR GLOMERULON
L5             100 S L3 AND PD <=2003
L6             100 FOCUS L5 1-
L7               0 S IBIB ABS HITSTR 1-100

=> d ibib abs hitstr 1-100 l6

L6   ANSWER 1 OF 100  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         1987:17915  CAPLUS
DOCUMENT NUMBER:          106:17915
ORIGINAL REFERENCE NO.:   106:3065a,3068a
TITLE:                    Oxaluric acid derivatives and pharmaceutical
                          compositions containing them
INVENTOR(S):              Ienaga, Kazuharu; Nakamura, Ko; Ishii, Akira
PATENT ASSIGNEE(S):       Nippon Zoki Pharmaceutical Co., Ltd., Japan
SOURCE:                   Eur. Pat. Appl., 32 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     EP 191735             A2    19860820    EP 1986-810068          19860210 <--
     EP 191735             A3    19870204
     EP 191735             B1    19900912
         R:  AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE
     JP 61183259           A     19860815    JP 1985-24010           19850209 <--
     JP 06060152           B     19940810
     US 4708954            A     19871124    US 1986-826997          19860207 <--
PRIORITY APPLN. INFO.:                       JP 1985-24010       A   19850209
OTHER SOURCE(S):          MARPAT 106:17915
AB   The title compds. R1R2NCONHCOCO2R3 (I; R1, R2 = H, alkyl, cycloalkyl;
     R1R2N = heterocyclyl; R3 = H, alkyl) and their salts and metal complexes,
     useful in treatment of diabetes, were prepared  Thus, MeNHCONH2 in THF was
     reacted with (ClCO)2 to give 1-methylimidazolidinetrione which was stirred
     in N NH3 at room temperature to give I (R1 = Me, R2 = H, R3 = NH4) (II).  In
     hyperglycemic rats II at 100 mg/kg, orally, reduced blood glucose levels
     by 25.2%.  Pharmaceutical formulations containing I are presented.
IT   89281-42-5P 105918-80-7P 105918-81-8P
     105918-82-9P, 5-Butyloxaluric acid 105918-83-0P
     105918-84-1P 105918-85-2P 105918-86-3P
     105918-87-4P 105918-88-5P 105918-89-6P
     105918-90-9P 105918-91-0P 105918-92-1P
     105918-93-2P 105918-94-3P 105918-97-6P
     105919-00-4P 105934-76-7P 105934-77-8P
     105934-78-9P 105934-79-0P 105934-80-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, as antidiabetic)
RN   89281-42-5  CAPLUS
CN   Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo-  (CA INDEX NAME)
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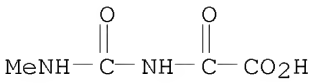

RN 105918-80-7 CAPLUS
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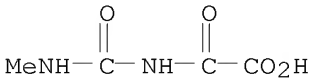

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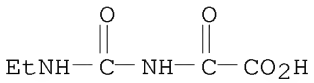

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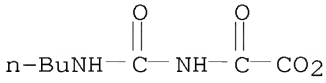

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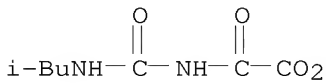

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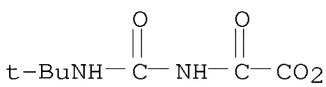

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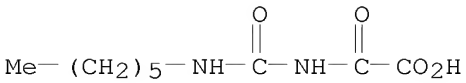

RN 105918-86-3 CAPLUS
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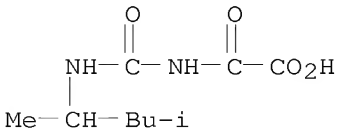

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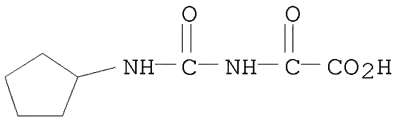
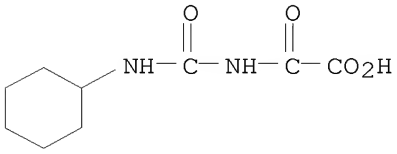


RN 105918-88-5 CAPLUS
CN Acetic acid, 2-[[(cyclohexylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



RN 105918-89-6 CAPLUS
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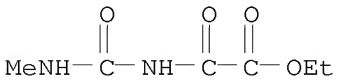

RN 105918-90-9 CAPLUS
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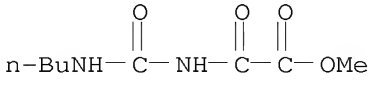

RN 105918-91-0 CAPLUS
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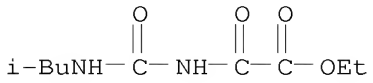
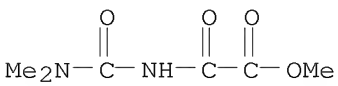
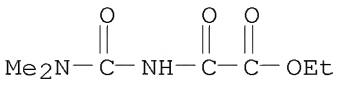


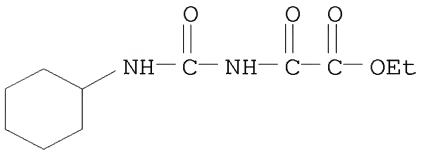
RN 105918-92-1 CAPLUS
CN Acetic acid, 2-[[(dimethylamino)carbonyl]amino]-2-oxo-, methyl ester (CA INDEX NAME)



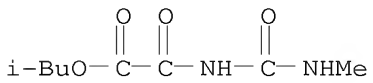
RN 105918-93-2 CAPLUS
CN Acetic acid, 2-[[(dimethylamino)carbonyl]amino]-2-oxo-, ethyl ester (CA INDEX NAME)



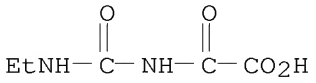
RN 105918-94-3 CAPLUS
CN Acetic acid, 2-[[(cyclohexylamino)carbonyl]amino]-2-oxo-, ethyl ester (CA INDEX NAME)



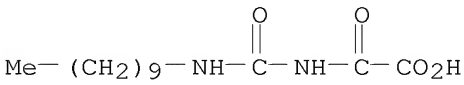
RN 105918-97-6 CAPLUS
CN Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo-, 2-methylpropyl ester (CA INDEX NAME)



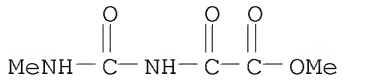
RN 105919-00-4 CAPLUS
CN Acetic acid, 2-[[(ethylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



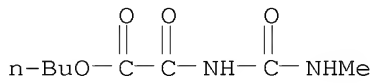
RN 105934-76-7 CAPLUS
CN Acetic acid, 2-[[(decylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



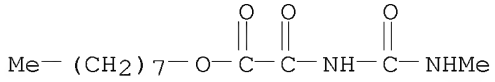
RN 105934-77-8 CAPLUS
CN Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo-, methyl ester (CA INDEX NAME)



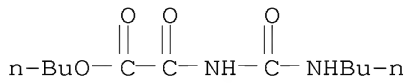
RN 105934-78-9 CAPLUS
CN Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo-, butyl ester (CA INDEX NAME)



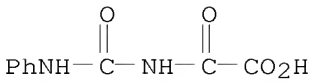
RN 105934-79-0 CAPLUS
CN Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo-, octyl ester (CA INDEX NAME)



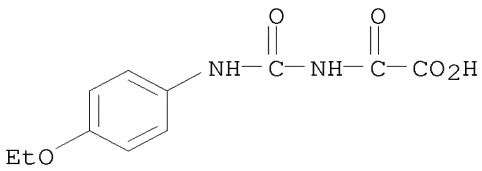
RN 105934-80-3 CAPLUS
CN Acetic acid, 2-[[(butylamino)carbonyl]amino]-2-oxo-, butyl ester (CA INDEX NAME)



L6 ANSWER 2 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:100431 CAPLUS
DOCUMENT NUMBER: 130:237830
TITLE: Synthesis and biological activity of aryloxaluric acid derivatives
AUTHOR(S): Petyunin, G. P.; Chubenko, O. V.; Abdulatif, Alsouri
CORPORATE SOURCE: Khark. Inst. Udoskonalennya Likariv, Kharkov, Ukraine
SOURCE: Farmatsevtichnii Zhurnal (Kiev) (1997), (5), 42-45
CODEN: FRZKAP; ISSN: 0367-3057
PUBLISHER: Zdorov'ya
DOCUMENT TYPE: Journal
LANGUAGE: Ukrainian
OTHER SOURCE(S): CASREACT 130:237830
AB Aryloxaluric acid salts and amides with amino acids or glucosamine were prepared and shown to have antimicrobial and local anesthetic activities.
IT 221391-56-6P 221391-58-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and biol. activity of aryloxaluric acid derivs.)
RN 221391-56-6 CAPLUS
CN Acetic acid, 2-oxo-2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)



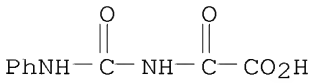
RN 221391-58-8 CAPLUS
CN Acetic acid, 2-[[[(4-ethoxyphenyl)amino]carbonyl]amino]-2-oxo- (CA INDEX NAME)



IT 221391-60-2P 221391-61-3P 221391-63-5P
221391-65-7P 221391-67-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and biol. activity of aryloxaluric acid derivs.)
RN 221391-60-2 CAPLUS
CN Acetic acid, 2-oxo-2-[[(phenylamino)carbonyl]amino]-, compd. with 2-methyl-2-propanamine (1:1) (CA INDEX NAME)

CM 1

CRN 221391-56-6
CMF C9 H8 N2 O4



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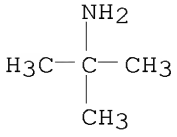
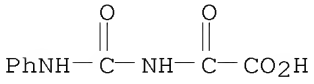
CMF C4 H11 N



RN 221391-61-3 CAPLUS
CN Acetic acid, 2-oxo-2-[[(phenylamino)carbonyl]amino]-, compd. with tricyclo[3.3.1.13,7]decan-1-amine (1:1) (CA INDEX NAME)

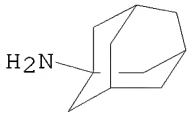
CM 1

CRN 221391-56-6
CMF C9 H8 N2 O4



CM 2

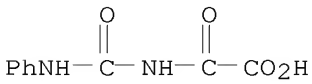
CRN 768-94-5
CMF C10 H17 N



RN 221391-63-5 CAPLUS
CN D-Glucose, 2-amino-2-deoxy-, oxo[[(phenylamino)carbonyl]amino]acetate (9CI) (CA INDEX NAME)

CM 1

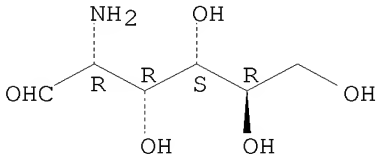
CRN 221391-56-6
CMF C9 H8 N2 O4



CM 2

CRN 3416-24-8
CMF C6 H13 N O5

Absolute stereochemistry. Rotation (+).



RN 221391-65-7 CAPLUS
CN Acetic acid, 2-oxo-2-[[(phenylamino)carbonyl]amino]-, compd. with 7-ethoxy-3,9-acridinediamine (1:1) (CA INDEX NAME)

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CRN 221391-56-6
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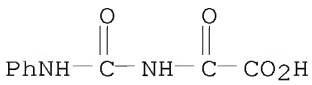

CM 2

CRN 442-16-0
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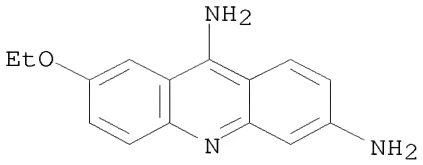
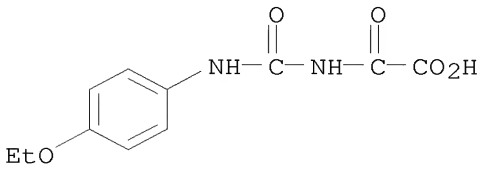


RN 221391-67-9 CAPLUS
CN Acetic acid, 2-[[[(4-ethoxyphenyl)amino]carbonyl]amino]-2-oxo-, compd. with 3,6-acridinediamine (1:1) (CA INDEX NAME)

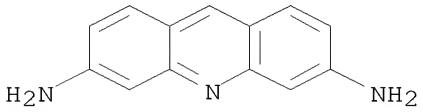
CM 1

CRN 221391-58-8
CMF C11 H12 N2 O5

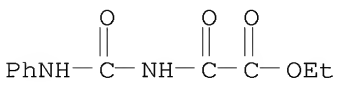


CM 2

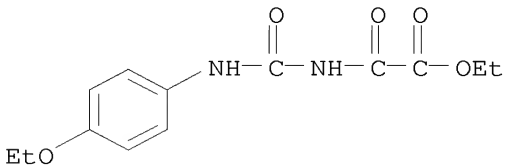
CRN 92-62-6
CMF C13 H11 N3



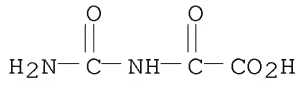
IT 221391-80-6 221391-81-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and biol. activity of aryloxaluric acid derivs.)
RN 221391-80-6 CAPLUS
CN Acetic acid, oxo[[(phenylamino)carbonyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



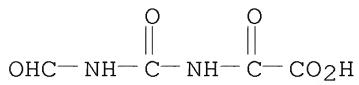
RN 221391-81-7 CAPLUS
CN Acetic acid, 2-[[[(4-ethoxyphenyl)amino]carbonyl]amino]-2-oxo-, ethyl ester (CA INDEX NAME)



L6 ANSWER 3 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:182339 CAPLUS
DOCUMENT NUMBER: 106:182339
ORIGINAL REFERENCE NO.: 106:29505a,29508a
TITLE: Effect of the initial concentration of organic compounds in water on the results of ozonation
AUTHOR(S): Gauducheau, Christine; Gilbert, Ernst; Eberle, Siegfried H.
CORPORATE SOURCE: Inst. Radiochem., Kernforschungszent. Karlsruhe, Karlsruhe, D-7500, Fed. Rep. Ger.
SOURCE: Zeitschrift fuer Wasser- und Abwasser-Forschung (1987), 20(1), 6-12
CODEN: ZWABAQ; ISSN: 0044-3727
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 106:182339
AB To apply the results of ozonization of organic compds. at high concns. (>100 mg/L) to low concns. found in raw water for drinking water treatment, the ozonization of isobarbituric acid (I) [496-76-4] at an initial concentration of 10-3M and 10-5M was investigated at pH values of 3, 7, and 12. At a pH of 3, the ozonization of I (10-3M) leads to the formation of formyloxaluric acid [106055-61-2] and oxaluric acid [585-05-7], and addnl. at pH 7 to HCO2H [64-18-6]. At the initial concentration of 10-5M (pH 7) besides oxaluric acid and HCO2H, oxalic acid [144-62-7] and alloxanic acid [470-44-0] are formed. Using the C balance, it is shown that >90% of the organic oxidation products are identified. The results of the ozonization of I at a pH of 12 as well as of the ozonization in the presence of humic acid at a pH of 7 and the reaction of Fenton's reagent show that 2 reaction mechanisms - the direct attack of O3 or the reaction of the hydroxyl radical - are responsible for the different oxidation products at different conditions. The reaction mechanisms are discussed.
IT 585-05-7P 106055-61-2P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in ozonization of water containing organic compds., concentration and pH effect on)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

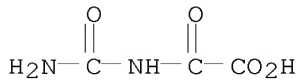


RN 106055-61-2 CAPLUS
CN Acetic acid, 2-[[(formylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)

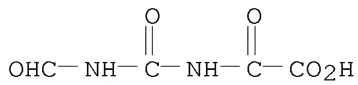


L6 ANSWER 4 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:38128 CAPLUS
DOCUMENT NUMBER: 106:38128
ORIGINAL REFERENCE NO.: 106:6297a
TITLE: Are the results of ozonation of model compounds at high concentrations transferable to the conditions of drinking water treatment with ozone?
AUTHOR(S): Gauducheau, C.; Gilbert, E.; Eberle, S. H.
CORPORATE SOURCE: Kernforschungszent. Karlsruhe, Karlsruhe, 7500, Fed.

Rep. Ger.
SOURCE: Ozone: Science & Engineering (1986), 8(3), 199-216
CODEN: OZSEDS; ISSN: 0191-9512
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ozonization of water containing 10-3-10-5M concns. of isobarbituric acid (I) [496-76-4], citraconic acid (II) [498-23-7], or o-chlorophenol (III) [95-57-8] at an O3 dose of 0.1-10 mg/L-min and a pH of 7 resulted in the formation of formyloxaluric acid [106055-61-2], oxaluric acid (V) [585-05-7], and HCOOH (VI) [64-18-6] in the case of I. At an initial concentration of 10-5M I/L, alloxanic acid [470-44-0] and oxalic acid (VII) [144-62-7] were formed in addition to V and VI. The oxidation products of II ozonization at 10-3M were glyoxylic acid [298-12-4], VI, VII, pyruvic acid [127-17-3], and hydroxypyruvic acid [1113-60-6]. The rate of oxidation of II at a concentration of 10-5M was 0.5 of the rate at 10-3M. Contrary to the results obtained at 10-3M, only 70% of the initial compds. were destroyed after a long ozonization period at an initial concentration of 10-5M II. The oxidation rate of III at a concentration of 10-5M was twice as fast as at an initial concentration of 10-3M; and in both cases yellow compds. were formed. The results of the ozonization of water containing high concns. of compds. at a pH of 7 can be used to qual. predict the oxidation products of an organic pollutant formed after the ozonization of a drinking water and take into account the attack of (OH). radicals at higher pH values.
IT 585-05-7P, Oxaluric acid
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in ozonization of drinking water containing isobarbituric acid)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

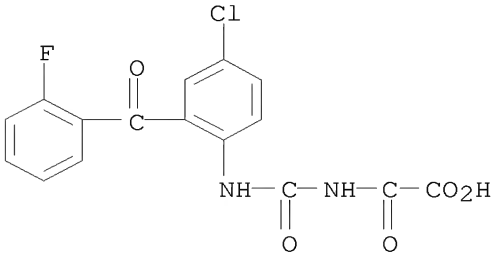


IT 106055-61-2P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in ozonization of drinking water containing isobarbituric acid and citraconic acid)
RN 106055-61-2 CAPLUS
CN Acetic acid, 2-[[(formylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)

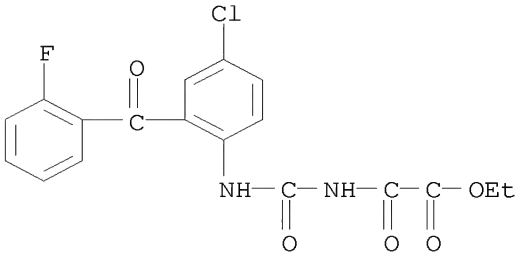


L6 ANSWER 5 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1973:466301 CAPLUS
DOCUMENT NUMBER: 79:66301
ORIGINAL REFERENCE NO.: 79:10715a,10718a
TITLE: Quinazolines. I. Oxidation of indole-1,2-dicarboximides and subsequent conversion of their oxidation products to quinazolinones
AUTHOR(S): Ishizumi, Kikuo; Inaba, Shigeho; Yamamoto, Hisao
CORPORATE SOURCE: Pharm. Div., Sumitomo Chem. Co., Ltd., Takarazuka, Japan

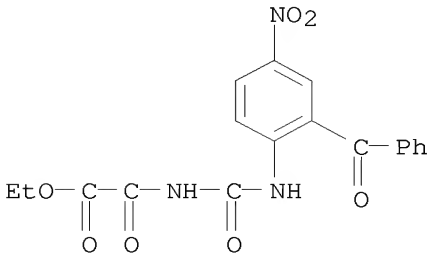
SOURCE: Journal of Organic Chemistry (1973), 38(15), 2617-9
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 79:66301
GI For diagram(s), see printed CA Issue.
AB Chromic acid oxidation of indole-1,2-dicarboximides (I, R = Cl, R1 = F; R = NO2, R1 = H) gave imidazolidinetriones (II) which on hydrolysis with base gave the corresponding dihydroquinazolinones (III). Ozonolysis of I gave the ozonides (IV). On heating with water, IV were readily converted to III in nearly quantitative yields. The mechanism for this conversion is discussed.
IT 40387-12-0P 40387-13-1P 40387-14-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 40387-12-0 CAPLUS
CN Acetic acid, [[[[4-chloro-2-(2-fluorobenzoyl)phenyl]amino]carbonyl]amino]oxo- (9CI) (CA INDEX NAME)



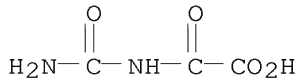
RN 40387-13-1 CAPLUS
CN Acetic acid, [[[[4-chloro-2-(2-fluorobenzoyl)phenyl]amino]carbonyl]amino]-2-oxo-, ethyl ester (9CI) (CA INDEX NAME)



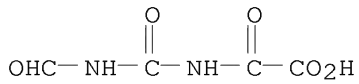
RN 40387-14-2 CAPLUS
CN Acetic acid, [[[(2-benzoyl-4-nitrophenyl)amino]carbonyl]amino]oxo-, ethyl ester (9CI) (CA INDEX NAME)



L6 ANSWER 6 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1932:9233 CAPLUS
DOCUMENT NUMBER: 26:9233
ORIGINAL REFERENCE NO.: 26:1034b-c
TITLE: Studies on the physiology of pyrimidines. IV. Further experiments on the intermediary metabolism of uracil
AUTHOR(S): Cerecedo, Leopold R.; Curry, Ethel F.; Stekol, Jakob A.; Elbaum, Henry
SOURCE: Journal of Biological Chemistry (1931), 93, 269-74
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C. A. 25, 335. Oxaltiric acid, I, and formyloxaluric acid, II, when fed to dogs, were metabolized to urea to the extent of 30-50%. On injection of I subcutaneously similar results were obtained, but II was toxic. The formation of I as an intermediate compound in the metabolism of uracil is therefore postulated.
IT 585-05-7, Oxaluric acid 106055-61-2, Oxamic acid, N-formylcarbamyl-
(metabolism of)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



RN 106055-61-2 CAPLUS
CN Acetic acid, 2-[[(formylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 7 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:696862 CAPLUS
DOCUMENT NUMBER: 139:230460
TITLE: Preparation of phenethanolamines as β2-adrenoreceptor agonists for treatment of respiratory diseases
INVENTOR(S): Blake, Keith; Coe, Diane Mary; Procopiou, Panayiotis Alexandrou
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003072539	A1	20030904	WO 2003-EP2301	20030227 <--

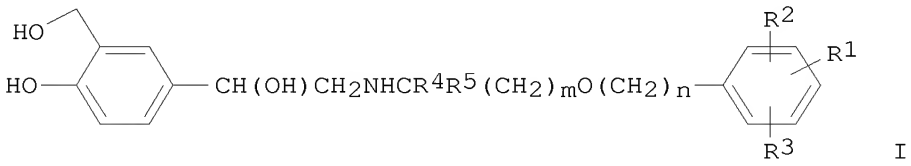
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003210428	A1	20030909	AU 2003-210428		20030227 <--
EP 1478620	A1	20041124	EP 2003-742975		20030227
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK					
JP 2005519083	T	20050630	JP 2003-571245		20030227
US 20050209338	A1	20050922	US 2004-506173		20040827
US 20070249630	A1	20071025	US 2007-766879		20070622
PRIORITY APPLN. INFO.:			GB 2002-4719	A	20020228
			WO 2003-EP2301	W	20030227
			US 2004-506173	B1	20040827

OTHER SOURCE(S): MARPAT 139:230460

GI



I

AB The present invention relates to phenethanolamines (shown as I; variables defined below; e.g. N-(4-fluorophenyl)-N'-[3-[4-[[6-[[(2R)-2-hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl]amino]hexyl]oxy]butyl]phenyl]urea acetate), to a process for their manufacture, to pharmaceutical compns. containing them, and to their use in therapy, in particular their use in the prophylaxis and treatment of respiratory diseases. At the human beta 2 adrenoreceptor, 37 examples of I had agonist IC50 values <1 μM. For I: m = 2-8; n = 3-11; with the proviso that m + n = 5-19; R1 is -XNR6C(O)NR7R8; wherein X = -(CH2)p- and C2-6alkenylene; R6 and R8 = H, C1-6alkyl and C3-7cycloalkyl; R7 = H, C1-6alkyl, C3-7cycloalkyl, -C(O)R9, Ph, naphthyl, hetaryl, and phenyl(C1-4alkyl)- and R7 is (un)substituted by 1 or 2 halo, hydroxy, C1-6alkyl, C1-6haloalkyl, C1-6alkoxy, -NHC(O)(C1-6alkyl), -SO2(C1-6alkyl), -SO2(phenyl), -CO2H, -CO2(C1-4alkyl) and CONR10R11; p = 0-6. Or R1 is cyclized such that R8 forms a bond with the Ph ring to which R1 is attached, via the ring C atom adjacent to R1, so as to form -NR6C(O)NR7-; R2 = H, C1-6alkyl, C1-6alkoxy, Ph, halo, and C1-6haloalkyl; R3 = H, hydroxy, C1-6alkyl, halo, C1-6alkoxy, Ph, C1-6haloalkyl, and -SO2NR12R13; addnl. details including provisos are given in the claims. Forty-two example prepns. of I are included. For example, 1-(4-fluorophenyl)-3-[3-[4-[[6-[[(2R)-2-hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl]amino]hexyl]oxy]butyl]phenyl]urea acetate was prepared in 11 steps starting from 2-bromo-1-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)ethanone, Cs2CO3, and di-tert-Bu iminodicarboxylate and involving the following intermediates: di(tert-butyl) 2-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-2-oxoethylimidodicarbonate, tert-Bu [2-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-2-oxoethyl]carbamate, tert-Bu [(2R)-2-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-2-hydroxyethyl]carbamate, (5R)-5-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-1,3-oxazolidin-2-one, 6-bromohexyl 3-butynyl ether, (5R)-3-[6-(but-3-ynyloxy)hexyl]-5-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-1,3-oxazolidin-2-one, (5R)-3-[6-[[4-(3-aminophenyl)-3-butynyl]oxy]hexyl]-5-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-1,3-oxazolidin-2-one, (5R)-3-[6-[4-(3-aminophenyl)butoxy]hexyl]-5-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-1,3-oxazolidin-2-one, 1-[3-[4-[[6-[(5R)-5-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-2-oxo-1,3-oxazolidin-3-yl]hexyl]oxy]butyl]phenyl]-3-(4-fluorophenyl)urea and 1-[3-[4-[[6-[[(2R)-2-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-2-hydroxyethyl]amino]hexyl]oxy]butyl]phenyl]-3-(4-fluorophenyl)urea.

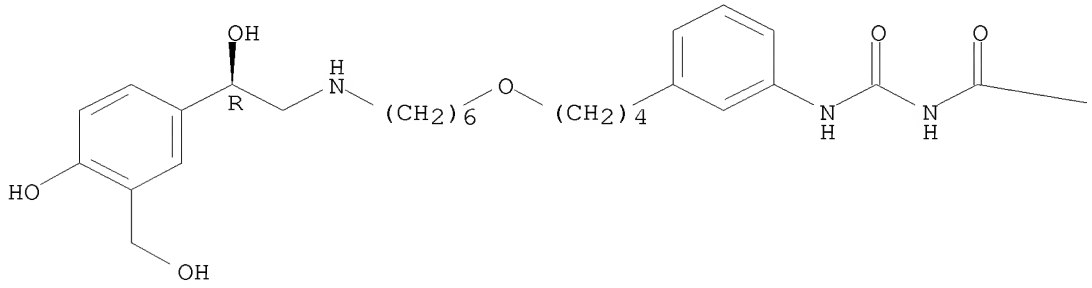
IT 594862-40-5P, [[[[3-[4-[[6-[[(2R)-2-Hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl]amino]hexyl]oxy]butyl]phenyl]amino]carbonyl]amino](oxo)acetic acid
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of phenethanolamines as β2-adrenoreceptor agonists for treatment of respiratory diseases)

RN 594862-40-5 CAPLUS

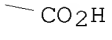
CN Acetic acid, 2-[[[[3-[4-[[6-[[(2R)-2-hydroxy-2-[4-hydroxy-3-(hydroxymethyl)phenyl]ethyl]amino]hexyl]oxy]butyl]phenyl]amino]carbonyl]amino]-2-oxo- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



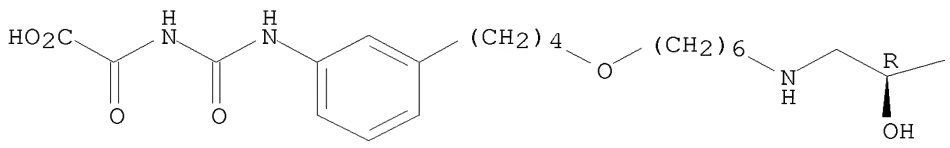
IT 594862-44-9P, [[[[3-[4-[[6-[[(2R)-2-(2,2-Dimethyl-4H-1,3-benzodioxin-6-yl)-2-hydroxyethyl]amino]hexyl]oxy]butyl]phenyl]amino]carbonyl]amino](oxo)acetic acid
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of phenethanolamines as β2-adrenoreceptor agonists for treatment of respiratory diseases)

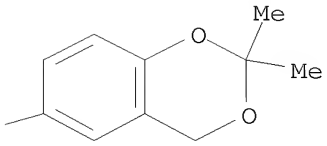
RN 594862-44-9 CAPLUS

CN Acetic acid, 2-[[[[3-[4-[[6-[[(2R)-2-(2,2-dimethyl-4H-1,3-benzodioxin-6-yl)-2-hydroxyethyl]amino]hexyl]oxy]butyl]phenyl]amino]carbonyl]amino]-2-oxo- (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



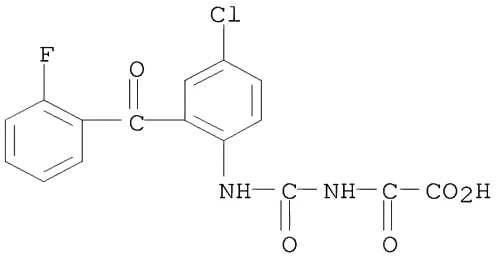


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

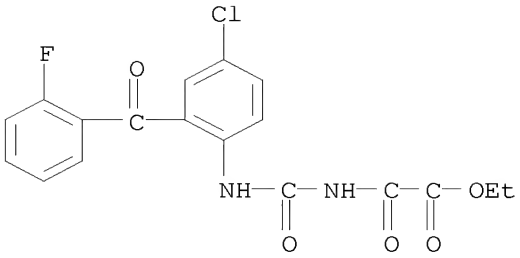
L6 ANSWER 8 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1975:410139 CAPLUS
DOCUMENT NUMBER: 83:10139
ORIGINAL REFERENCE NO.: 83:1705a,1708a
TITLE: Quinazolinone compounds
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Neth. Appl., 16 pp.
CODEN: NAXXAN
DOCUMENT TYPE: Patent
LANGUAGE: Dutch
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 7304967	A	19741014	NL 1973-4967	19730410 <--

PRIORITY APPLN. INFO.: NL 1973-4967 A 19730410
GI For diagram(s), see printed CA Issue.
AB Antiinflammatory and analgesic (no date) quinazolinones I(R = Me, R1 = H, R2 = Cl; R = H, R1 = F, R2 = Cl; R = R1 = H, R2 = NO2) were prepared Thus 1-methyl-3-phenyl-5-chloro-2-indolecarbonyl azide was treated with EtOH and the Et carbamate oxidized to 2,4-Bz(Cl)C6H3NMeCONHCO2Et, which on basic hydrolysis gave I(R = Me, R1 = H, R2 = Cl).
IT 40387-12-0P 40387-13-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)
RN 40387-12-0 CAPLUS
CN Acetic acid, [[[[4-chloro-2-(2-fluorobenzoyl)phenyl]amino]carbonyl]amino]oxo- (9CI) (CA INDEX NAME)



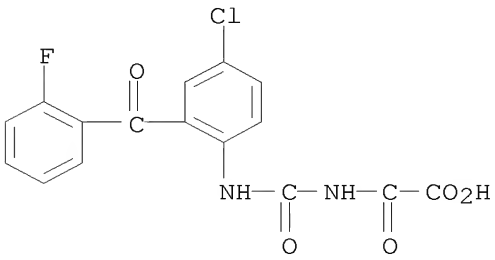
RN 40387-13-1 CAPLUS
CN Acetic acid, [[[[4-chloro-2-(2-fluorobenzoyl)phenyl]amino]carbonyl]amino]-2-oxo-, ethyl ester (9CI) (CA INDEX NAME)



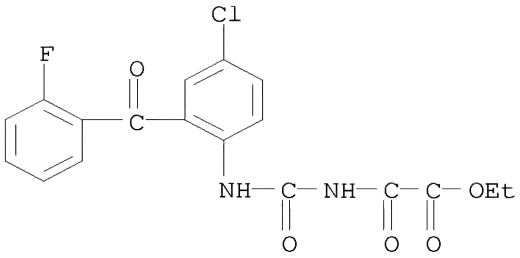
L6 ANSWER 9 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1975:73020 CAPLUS
DOCUMENT NUMBER: 82:73020
ORIGINAL REFERENCE NO.: 82:11675a,11678a
TITLE: Quinazolinone compounds
INVENTOR(S): Ishizumi, Kikuo; Mori, Kazuo; Yamamoto, Michihiro; Yamamoto, Hisao; Koshiba, Masao; Inaba, Shigeho
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.
SOURCE: Can., 25 pp.
CODEN: CAXXA4
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 949573	A1	19740618	CA 1973-168918	19730417 <--
PRIORITY APPLN. INFO.:			CA 1973-168918 A	19730417

OTHER SOURCE(S): MARPAT 82:73020
GI For diagram(s), see printed CA Issue.
AB The quinazolinones I (R = Me, R1 = H, R2 = Cl; R = H, R1 = F, R2 = Cl; R = R1 = H, R2 = NO2) were prepared by several methods. Thus, 1-methyl-3-phenyl-5-chloroindole-2-carboxylic azide was heated and then treated with PhCH2OH and the resulting carbamate oxidized with chromic anhydride to give 4,2-Cl(PhCO)C6H3NMeCONHCO2CH2Ph, which was cyclized with HCl to give I (R = Me, R1 = H, R2 = Cl).
IT 40387-12-0P 40387-13-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)
RN 40387-12-0 CAPLUS
CN Acetic acid, [[[[4-chloro-2-(2-fluorobenzoyl)phenyl]amino]carbonyl]amino]oxo- (9CI) (CA INDEX NAME)



RN 40387-13-1 CAPLUS
CN Acetic acid, [[[[4-chloro-2-(2-fluorobenzoyl)phenyl]amino]carbonyl]amino]-2-oxo-, ethyl ester (9CI) (CA INDEX NAME)

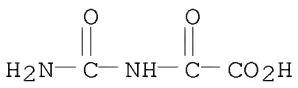


L6 ANSWER 10 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:569016 CAPLUS
DOCUMENT NUMBER: 137:256858
TITLE: Flexible Square Supramolecular Rings with Hydrogen-Bonded Bushing in Solid-State Oxalurate Complexes: Versatility of the Oxalurate Ligand in Covalent and Noncovalent Binding
AUTHOR(S): Falvello, Larry R.; Garde, Raquel; Tomas, Milagros
CORPORATE SOURCE: Department of Inorganic Chemistry and Aragon Materials Science Institute, University of Zaragoza-CSIC, Zaragoza, E-50009, Spain
SOURCE: Inorganic Chemistry (2002), 41(17), 4599-4604
CODEN: INOCAJ; ISSN: 0020-1669
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:256858

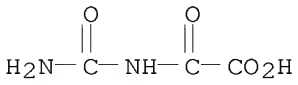
AB Isotypic pseudooctahedral complexes of Co, Ni, and Cu with two chelating oxalurate ligands and two H2O mols., trans-[M(oxalurate)2(H2O)2], were synthesized and isolated by a novel progressive crystallization technique. Diffraction analyses reveal that the three complexes form isotypic solid-state structures in which the mol. connectivity and complex network of noncovalent interactions are qual. identical throughout the series. The oxalurate groups form unbounded chains through two different self-recognition patterns-a typical DA-AD motif and an unusual DDA'-A'DD form (D = H bond donor, A' = double acceptor). The unsym. oxalurate group possesses the topol. properties necessary to form aggregates of higher symmetry, and the M(oxalurate)2 fragments form a rhombic 2-dimensional motif with H-bonded corners and with H-bond acceptors directed to the inside of the cyclic aggregate. The 2-dimensional net is stacked to form a channeled 3-dimensional structure, in which the coordinated aqua ligands form the principal interlayer interactions. The slanted channels are occupied by the axial waters and by waters of crystallization, which are H bonded to the channel walls to form an ordered bushing. The extensive 3-dimensional H-bonded superstructure is flexible enough to accommodate the distortion produced by the Jahn-Teller effect in the Cu compound without requiring a qual. structural change. The bonds affected by Jahn-Teller distortion in the Cu complex [Cu-O = 2.3788(15) Å] are significantly longer than their analogs in the Co and Ni complexes [Co-O = 2.175(2), Ni-O = 2.094(9) Å].

IT 460049-76-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and complexation with transition metals)

RN 460049-76-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo-, sodium salt (1:1) (CA INDEX NAME)

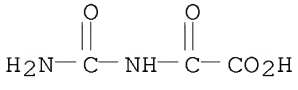


IT 585-05-7, Oxaluric acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of sodium oxalurate)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

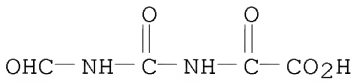


REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:639384 CAPLUS
DOCUMENT NUMBER: 117:239384
ORIGINAL REFERENCE NO.: 117:41289a,41292a
TITLE: Ozonation of pyrimidines in aqueous solutions
AUTHOR(S): Gilbert, E.; Hoffmann-Glewe, S.
CORPORATE SOURCE: Inst. Radiochem., Kernforschungszent. Karlsruhe, Karlsruhe, 7500, Germany
SOURCE: Water Research (1992), 26(11), 1533-40
CODEN: WATRAG; ISSN: 0043-1354
DOCUMENT TYPE: Journal
LANGUAGE: English
AB It was demonstrated in all cases that the oxidative attack takes place on C5 or C6 while, depending on the pH, stable 6-ring compds., such as alloxan, 5-ring compds., such as parabanic acid and alloxanic acid, and ring-opening products, such as formyloxaluric acid, oxaluric acid and formic acid are formed. In some cases, H2O2 was detected as the inorg. product. The oxidation of hydantoin causes a quant. production of parabanic acid
in acid solution, whereas at pH 7 ring-opening takes place and oxaluric acid was detected as the product of oxidation From the C balances, >90% of the products were detected.
IT 585-05-7P, Oxaluric acid 106055-61-2P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in pyrimidine ozonization, pH effect on, in aqueous solution,
water purification in relation to)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



RN 106055-61-2 CAPLUS
CN Acetic acid, 2-[[(formylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)

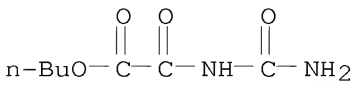


L6 ANSWER 12 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1967:75960 CAPLUS
DOCUMENT NUMBER: 66:75960
ORIGINAL REFERENCE NO.: 66:14247a,14250a
TITLE: Synthesis of semioxamazones, semioxamides and their derivatives
AUTHOR(S): Moshchitskii, S. D.; Sologub, L. S.; Pavlenko, A. F.; Akkerman, V. P.
SOURCE: Zhurnal Organicheskoi Khimii (1966), 2(12), 2164-7
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian

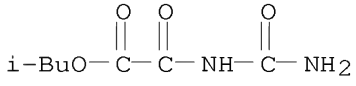
AB The title compds. R:NCOCONHR1 (I) were prepared by condensation of 5-(α-hydroxy-β,β,β-trichloroethyl)-semioxamazide (II) or of 5-(1H-1,2,4-triazol-3-yl)semioxamazide (III) with a carbonyl compound Yields of alkyl oxamates were also improved. A solution of 0.1 mole H2NCONH2 in 100 ml. Me2CO was refluxed with addition of 0.12 mole BuO2CCOCl in 20 moles Me2CO 1.5 hrs. Crystallization from the reaction mixture gave N-(butyloxalyl)urea, m. 170-1°, in 80% yield. Similarly, the following RCOCONHR (IV) were prepared (R, R1, m.p., and yield given Et, 1H-1, 2,4-triazolyl, 230-2°, 92; iso-Pr, CH(OH)CCl3, 112-14°, 85; iso-Bu, CONH2, 162-4°, 78. An alc. solution of IV [R = iso-Pr, R1 = CH(OH)CCl3] and N2H4 kept 12 hrs. gave directly II, m. 180-1°, in 60% yield. Similarly, III, m. >300° was obtained in 90% yield. II in a little water heated with cyclopentanone 4 hrs. gave on cooling a precipitate of I [R = cyclopentyl, R1 = CH(OH)CCl3], m. 175-6°, in 80% yield. Similarly, the following I were prepared (R, R1, and m.p. given) CHCCl:CClCO2H, H, 217-18°; cyclopentylidene, H, 163-4°; MeCCO2H, CH2CH2OH, 158-60°; Me2C, CH2CH2OH, 130-1°; CHCCl:CClCO2H, CH2CH2OH, 187-8°; MeCEt, CH2CH2OH, 9 2-3°; p-BrC6H4CH, H, >300°; p-O2NC6H4CH, H, 272-4°; cyclopentylidene, 1H-1,2,4-triazolyl, >300°; cyclopentylidene, CH2CH2OH, 135-6°; isatinylidene, H, >300°; PhCH, 1H-1,2,4-triazolyl, >300°; p-BrC6H4CH, CH2CH2OH, 269-70°; PhCH, CH2CH2OH, 223-5°; PhCMe, 1H-1,2,4-triazolyl, >300°; PhCH, H, 215-16°; PhCMe, CH2CH2OH, 168-70°.

IT 13581-63-0P 13581-65-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 13581-63-0 CAPLUS
CN Oxaluric acid, butyl ester (8CI) (CA INDEX NAME)



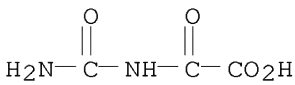
RN 13581-65-2 CAPLUS
CN Oxaluric acid, isobutyl ester (8CI) (CA INDEX NAME)



L6 ANSWER 13 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1966:474751 CAPLUS
DOCUMENT NUMBER: 65:74751
ORIGINAL REFERENCE NO.: 65:13997g-h,13998a
TITLE: Oxidation of guanine and guanosine by bromine
AUTHOR(S): Shapiro, Robert; Agarwal, Satish C.
CORPORATE SOURCE: New York Univ., New York, NY
SOURCE: Biochemical and Biophysical Research Communications (1966), 24(3), 401-5
CODEN: BBRCA9; ISSN: 0006-291X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In order to establish the chemical basis for the mutagenic effect of brominating agents, guanine (I) and guanosine (II) were subjected to the action of Br, and the reaction products were investigated. Treatment of I with excess Br in H2O at room temperature for several days afforded 38% oxalylguanidine (III), m. >300°. Alternate routes to III were: (1) CrO3 oxidation of 2amino-4,6-dihydroxypyrimidine, or (2) condensation of EtO2CCO2Et with H2NC(NH2): NH.H2CO3. The latter reaction also yielded oxalylbiguanide (IV), m. 232-4°. In addition to III, the following degradation products were formed from I upon reaction with Br (method of isolation and percent yield given): oxaluric acid (NH4+ salt, 32); guanidine (picrate, 26); and oxalic acid (Ca++ salt, 24). The presence of urea was also demonstrated chromatographically and estimated spectrophotometrically. Reaction of I with Br in a limited amount of H2O gave rise to 8-bromoguanine, from which the same degradation products were produced upon further treatment with aqueous Br. When II was allowed to react with excess Br in H2O the initial product (65% yield) was identified as 8-bromoguanosine (V). Upon further reaction, V was degraded to the following products: oxalic acid, guanidine, urea, ribose, D-ribosylurea, and D-ribosyloxaluric acid. Paper chromatography and electrophoresis were used for the separation and identification of these products. The mutagenic action of Br is attributed to destruction of the guanine residues in nucleic acids. The loss of guanine would result in disruption of H bonds and a weakening of the secondary structure of the nucleic acid chains.

IT 13188-21-1
(Derived from data in the 7th Collective Formula Index (1962-1966))
RN 13188-21-1 CAPLUS
CN Oxaluric acid, monoammonium salt (8CI) (CA INDEX NAME)



(from guanine bromination

L6 ANSWER 14 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1914:8483 CAPLUS
DOCUMENT NUMBER: 8:8483
ORIGINAL REFERENCE NO.: 8:1271g-i
TITLE: Synthesis of amino-oxalylbiuret, NH2COCONHCONHCONH2
AUTHOR(S): Born-Water, J. Th.
SOURCE: Verslag van de Gewone Vergadering van de Afdeling Natuurkunde, Koninklijke Nederlandse Akademie van Wetenschappen (1914), 22, 190-2
CODEN: KNWNAC; ISSN: 0368-6329
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Amido-oxalylbiurel was synthesized in order to prove that it is not

identical with oxalyldiureide. 2 mols. of H2NCOCO2Et + 1 mol. (COCl)2 b. in dry C6H6 liberate HCl and on cooling carbonyldi(oxamethane), CO(NHCOCO2Et)2. seps.; needles, m. 115-6°. (COCl)2 + mol. amts. of urethan and oxamethane b. in dry C6H6 give α-carbethoxyyl-β-oxalylethoxyluera (a), EtO2CCONHCONHCO2Et, recrystd. from EtAc, m. 152°. When (a) in EtOH is treated in the cold with dry NH3 amido-oxalylbiuret seps. as a white amorphous compound, insol. in all usual solvents. The EtOH mother liquor on evaporation gives NH2CONHCO2Et.

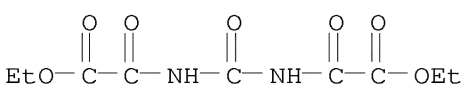
Likewise

(a) when acting with NH3 in warm solution gives NH2CONHCO2Et and H2NCOCO2Et. B. considers that Grimaux's "amide of oxalylbiuretic acid" and the synthetic amido-oxalylbiuret are identical.

IT 871901-91-6P, Oxamic acid, N,N'-carbonylbis-, diethyl ester
871901-92-7P, Oxamic acid, (carbethoxycarbamyl)-
RL: PREP (Preparation)
(preparation of)

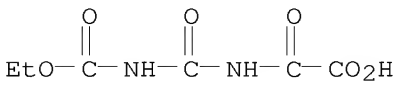
RN 871901-91-6 CAPLUS

CN Oxamic acid, N,N'-carbonylbis-, diethyl ester (1CI) (CA INDEX NAME)



RN 871901-92-7 CAPLUS

CN Acetic acid, 2-[[[(ethoxycarbonyl)amino]carbonyl]amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 15 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1914:8482 CAPLUS

DOCUMENT NUMBER: 8:8482

ORIGINAL REFERENCE NO.: 8:1271g-i

TITLE: Synthesis of amino-oxalylbiuret, NH2COCONHCONHCONH2

AUTHOR(S): Born-Water, J. Th.

SOURCE: Recueil des Travaux Chimiques des Pays-Bas et de la Belgique (1914), 22, 334-9
CODEN: RTCPB4; ISSN: 0370-7539

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Amido-oxalylbiurel was synthesized in order to prove that it is not identical with oxalyldiureide. 2 mols. of H2NCOCO2Et + 1 mol. (COCl)2 b. in dry C6H6 liberate HCl and on cooling carbonyldi(oxamethane), CO(NHCOCO2Et)2. seps.; needles, m. 115-6°. (COCl)2 + mol. amts. of urethan and oxamethane b. in dry C6H6 give α-carbethoxyyl-β-oxalylethoxyluera (a), EtO2CCONHCONHCO2Et, recrystd. from EtAc, m. 152°. When (a) in EtOH is treated in the cold with dry NH3 amido-oxalylbiuret seps. as a white amorphous compound, insol. in all usual solvents. The EtOH mother liquor on evaporation gives NH2CONHCO2Et.

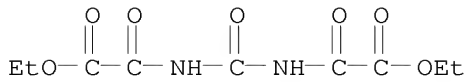
Likewise

(a) when acting with NH3 in warm solution gives NH2CONHCO2Et and H2NCOCO2Et. B. considers that Grimaux's "amide of oxalylbiuretic acid" and the synthetic amido-oxalylbiuret are identical.

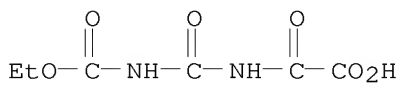
IT 871901-91-6P, Oxamic acid, N,N'-carbonylbis-, diethyl ester
871901-92-7P, Oxamic acid, (carbethoxycarbamyl)-
RL: PREP (Preparation)
(preparation of)

RN 871901-91-6 CAPLUS

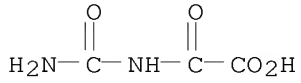
CN Oxamic acid, N,N'-carbonylbis-, diethyl ester (1CI) (CA INDEX NAME)



RN 871901-92-7 CAPLUS
CN Acetic acid, 2-[[[(ethoxycarbonyl)amino]carbonyl]amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 16 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1984:1457 CAPLUS
DOCUMENT NUMBER: 100:1457
ORIGINAL REFERENCE NO.: 100:255a,258a
TITLE: Oxalurate induction of multiple URA3 transcripts in Saccharomyces cerevisiae
AUTHOR(S): Buckholz, Richard G.; Cooper, Terrance G.
CORPORATE SOURCE: Dep. Biol. Sci., Univ. Pittsburgh, Pittsburgh, PA, 15260, USA
SOURCE: Molecular and Cellular Biology (1983), 3(11), 1889-97
CODEN: MCEBD4; ISSN: 0270-7306
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The URA3 gene from S. cerevisiae is localized on a 1.1-kilobase (kb) DNA fragment. By using this fragment as a hybridization probe, it was found that oxalurate [585-05-7], a gratuitous inducer of the allantoin degradative system, also serves to induce URA3-specific RNA. This response is restricted to oxalurate; other conditions which bring about high-level synthesis of the allantoin degradative enzymes did not produce the effect. Two classes of RNA (1.0 and 1.5 kb) were found to be oxalurate-induced. Both classes are encoded by the URA3 gene, overlap, and probably do not significantly differ at their 5' termini. Northern blot mapping of the transcripts indicated that the 1.5-kb transcript was likely encoded by sequences extending <0.5 kb downstream from the 3' terminus of the 1.0-kb transcript. Anal. of the endpoints of the major 1.0-kb URA3 transcript by S1 nuclease mapping revealed the existence of two 5' termini, separated by 5-10 nucleotides, and seven 3' termini, separated by
5-20 nucleotides each, over a range of .apprx.70 bases.
IT 585-05-7
RL: PRP (Properties)
(gene URA3 transcription induction by, in Saccharomyces cerevisiae)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 17 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:46959 CAPLUS
DOCUMENT NUMBER: 132:74531
TITLE: Method for knocking out gene transcripts by covalent binding of an antisense probe

INVENTOR(S): Lin, Shi-lung; Ying, Shao-yao
PATENT ASSIGNEE(S): Epiclone Inc., USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

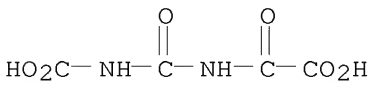
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6015676	A	20000118	US 1998-127368	19980731 <--
WO 2001013959	A1	20010301	WO 1999-US19469	19990826 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9957857	A	20010319	AU 1999-57857	19990826 <--

PRIORITY APPLN. INFO.: US 1998-127368 A 19980731
WO 1999-US19469 A 19990826

AB The present invention provides a simple, specific and nontoxic gene knock-out method by formation of covalent bonding between modified probes and targeted sequences. When covalently modified first strand probes are hybridized with a second strand of targeted gene transcripts, certain modified bases of said first strand will interact with natural bases of said second strand to form covalent bonds by which the translation of said second strand is inhibited. Because the hybridization of said two strands generates covalent base-pairing only between their complementary homol. region(s), such specificity increases the targeting efficiency of a gene knock-out system. Also, because neither a polymerase extension reaction nor a nuclease digestion can be performed through the covalently bonded region(s) of aforesaid hybrids, the present invention in conjunction with a delivery method can be used to inactivate intracellular functions of targeted nucleotide sequences, to inhibit viral infections in vivo and to increase binding stability of antisense drugs in a gene therapy.

IT 253801-94-4P
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(covalent bond-forming base analog; method for knocking out gene transcripts by covalent binding of an antisense probe)

RN 253801-94-4 CAPLUS
CN Acetic acid, 2-[[(carboxyamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 18 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1978:75310 CAPLUS
DOCUMENT NUMBER: 88:75310
ORIGINAL REFERENCE NO.: 88:11895a,11898a
TITLE: Copper phthalocyaninesulfonic acid
INVENTOR(S): Sekiguchi, Tatsuo; Tanaka, Motoo
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52105933	A	19770906	JP 1976-22762	19760303 <--
JP 54037888	B	19791117		

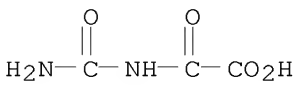
PRIORITY APPLN. INFO.: JP 1976-22762 A 19760303

AB Sulfuric acid salts of copper phthalocyanine (I) are heated in the presence of oxalic acid (II) [144-62-7] or II derivs. to give copper phthalocyaninesulfonic acids. Thus, 77 g of I disulfate and 3 g oxalamic acid [471-47-6] were kneaded 30 min at 220-30° and 10 mm, treated in hot aqueous NH3, and salted with (NH4)2CO3 to give 73 g ammonium copper phthalocyaninedisulfonate [65466-68-4].

IT 585-05-7
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for sulfonation of copper phthalocyanine)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 19 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:693525 CAPLUS
DOCUMENT NUMBER: 139:215960
TITLE: Waterproof aqueous printing inks containing proton scavengers for high stability, ink cartridges, and ink-jet printers therewith
INVENTOR(S): Arase, Hidekazu; Soga, Sanemori
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

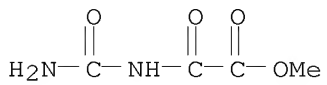
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003246948	A	20030905	JP 2002-50161	20020226 <--
JP 4015862	B2	20071128		

PRIORITY APPLN. INFO.: JP 2002-50161 20020226

AB The aqueous inks comprise (A) colorants, (B) moisturizers, (C) water-soluble substances (e.g., hydrolyzable silanes or their partially hydrolyzates) capable of condensation polymerization without water, (D) proton scavengers chosen from carbonyl compds., amides, water-soluble sulfoxides, water-soluble sulfones, hexamethyl phosphoramide, and cyano compds., and optionally (E) wetting agents. A-C complexes in the inks are stabilized at a wide pH range by the proton scavengers D. Thus, an aqueous ink containing Acid Black 2, glycerin, a reaction product of (MeO)4Si and H2N(CH2)2NH(CH2)2Si(OMe)3, acetone, and diethylene glycol monobutyl ether showed no precipitation at pH 10.5, good discharging from an ink-jet head, and high water resistance when printed.

IT 530084-26-5
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

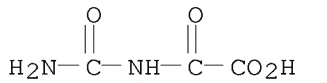
use); USES (Uses)
(proton scavengers; aqueous waterproof jet-printing inks containing proton
scavengers for high stability)
RN 530084-26-5 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo-, methyl ester (CA INDEX NAME)



L6 ANSWER 20 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1963:70892 CAPLUS
DOCUMENT NUMBER: 58:70892
ORIGINAL REFERENCE NO.: 58:12109e
TITLE: Diazotype compositions
INVENTOR(S): Schaeffer, Andre
PATENT ASSIGNEE(S): Etablissements Bauchet Cie.
SOURCE: 17 pp.; Addn. to Fr. 1,249,913 (CA 56, 6831g)
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 78679		19620824	FR 1960-843696	19601110 <--

AB A mixture of an alkylated or arylated sulfamide and a urea or thiourea is used as the developing agent, and a hydroxycarboxylic acid, an oxamide, a malonamide, a cyanocarboxylic acid, or an oxaluric acid is used as the stabilizing agent.
IT 585-05-7, Oxaluric acid
(derivs. and related compds., as stabilizers in diazotype process)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



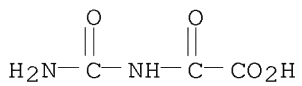
L6 ANSWER 21 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:714471 CAPLUS
DOCUMENT NUMBER: 139:359722
TITLE: MALDI-TOF mass spectrometry as a powerful tool to study enzymatic processing of DNA lesions inserted into oligonucleotides
AUTHOR(S): Gasparutto, D.; Saint-Pierre, C.; Jaquinod, M.; Favier, A.; Cadet, J.
CORPORATE SOURCE: Laboratoire des Lesions des Acides Nucleiques, Service Chimie Inorganique Biologique, Grenoble, F-38054, Fr.
SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2003), 22(5-8), 1583-1586
CODEN: NNNAFY; ISSN: 1525-7770
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB MALDI-TOF mass spectrometry measurements, coupled with either exonuclease or DNA N-glycosylases digestions of lesion-containing oligonucleotides, were used to assess biochem. features of several oxidative DNA damage. The latter anal. approach was shown to be an informative and efficient

alternative technique to conventional electrophoresis and chromatog. analyses.

IT 585-05-7, Oxaluric acid
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(MALDI-TOF mass spectrometry as a powerful tool to study enzymic processing of DNA lesions inserted into oligonucleotides)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 22 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:199953 CAPLUS

DOCUMENT NUMBER: 138:409646

TITLE: A computational and experimental search for polymorphs of parabanic acid - a salutary tale leading to the crystal structure of oxo-ureido-acetic acid methyl ester

AUTHOR(S): Lewis, T. C.; Tocher, D. A.; Day, G. M.; Price, S. L.

CORPORATE SOURCE: Centre for Theoretical and Computational Chemistry, University College London, London, WC1H 0AJ, UK

SOURCE: CrystEngComm (2003), 5, 3-9
CODEN: CRECF4; ISSN: 1466-8033
URL: http://www.rsc.org/CFCart/displayarticleeonfree.cfm?article=8%2D9%223%24%5DVZB%214%2E%5FL1%286%2COZ5%2D%40%3CP5H%3D29%23%3C%0A

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal; (online computer file)

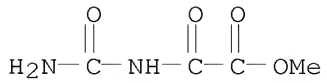
LANGUAGE: English

AB A computational search to predict the crystal structure of parabanic acid produced the known P21/c/c crystal structure as the global min. in the lattice energy. However, there are many hypothetical structures only 2-6 kJ mol-1 less stable than the known form, which are within the energy range of possible polymorphism and have reasonable mech. properties and relative growth rates. The harmonic intermol. frequencies and the attachment energy estimate of relative growth rates suggest that the known polymorph is thermodynamically and kinetically favored, but the possibility of other polymorphs cannot be excluded. A simultaneous exptl. search for new polymorphs found crystals with a new morphol. and x-ray powder pattern when a solution of parabanic acid in MeOH was left to evaporate
Eventually, the structure was shown by single crystal x-ray diffraction to be that of oxo-ureido-HOAc Me ester (triclinic space group P.hivin.1). Thus, under the conditions of recrystn. from MeOH, parabanic acid had undergone a previously unreported ring-opening reaction, and had not crystallized as a new polymorph as had seemed likely prior to single crystal characterization. The combination of the exptl. and theor. studies indicates that new polymorphs of parabanic acid are unlikely to be found readily.

IT 530084-26-5
RL: PRP (Properties)
(crystal structure of)

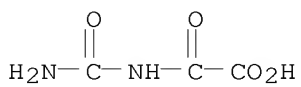
RN 530084-26-5 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo-, methyl ester (CA INDEX NAME)



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 23 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:931417 CAPLUS
DOCUMENT NUMBER: 136:65119
TITLE: Oxidation of 7,8-Dihydro-8-oxoguanine Affords Lesions That Are Potent Sources of Replication Errors in Vivo
AUTHOR(S): Henderson, Paul T.; Delaney, James C.; Gu, Feng; Tannenbaum, Steven R.; Essigmann, John M.
CORPORATE SOURCE: Division of Bioengineering and Environmental Health and Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Biochemistry (2002), 41(3), 914-921
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Three single-stranded DNA genomes have been constructed that contain the 8-oxo-7,8-dihydro-2'-deoxyguanosine (8-oxodG) oxidation products oxaluric acid, oxazolone, and cyanuric acid. Oligonucleotides containing each lesion were synthesized by treating an oligonucleotide containing a single 8-oxodG with peroxynitrite, and the desired products were isolated by HPLC. The modified oligonucleotides were ligated into M13mp7L2 bacteriophage DNA in such a way that the lesion was situated at a known site in the lacZ gene fragment of the viral genome. The circular genomes were transfected into wild-type AB1157 Escherichia coli. The relative efficiency of lesion bypass by DNA polymerase was determined by counting the number of initial independent infections produced by each genome relative to that of an unmodified DNA control. Viral progeny were analyzed for mutation frequency and type by PCR amplification of the insert region followed by a recently developed post-labeling assay. All three secondary lesions were readily bypassed, causing G → T transversions at frequencies at least an order of magnitude higher than 8-oxodG. These data establish a model whereby the modestly mutagenic primary lesion 8-oxodG is oxidized in vivo to much more highly mutagenic secondary lesions.
IT 585-05-7, Oxaluric acid
RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(mutagenic potential of 8-oxo-7,8-dihydro-2'-deoxyguanosine oxidation products oxaluric acid, oxazolone, and cyanuric acid tested by inserting oligonucleotides containing each of these into bacteriophage DNA
and transfection into Escherichia)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



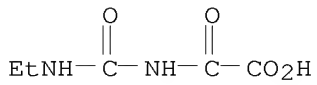
REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 24 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:924460 CAPLUS
DOCUMENT NUMBER: 136:162488
TITLE: Peroxynitrite Reacts with 8-Nitropurines to Yield 8-Oxopurines

AUTHOR(S): Lee, Joseph M.; Niles, Jacquin C.; Wishnok, John S.; Tannenbaum, Steven R.
CORPORATE SOURCE: Division of Bioengineering and Environmental Health and Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Chemical Research in Toxicology (2002), 15(1), 7-14
CODEN: CRTOEC; ISSN: 0893-228X
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Peroxynitrite reacts with 2'-deoxyguanosine to yield several major products, including 8-oxo-2'-deoxyguanosine (8-oxodG) and 8-nitroguanine (8-nitroGua). While the terminal products formed during the reaction of 8-oxodG with peroxynitrite have been previously characterized, those formed from 8-nitroGua have not. To identify these products, 9-ethyl-8-nitroxanthine was used as a model for 8-nitroGua, since the former could be easily synthesized in high yield, and facilitated reversed-phase HPLC separation of the resulting products. Using this model substrate, the products formed during the peroxynitrite reaction were identified as the Et derivs. of oxaluric acid, 5-iminoimidazolidin-2,4-dione, [N-nitro-N'-[2,4-dioxo-imidazolidine-5-ylidene]-urea], dehydroallantoin, parabanic acid, cyanuric acid, and uric acid. Upon the basis of the previous studies with 8-oxodG, these products were recognized as those expected to arise from peroxynitrite-mediated uric acid oxidation Furthermore, the presence of uric acid in the reaction mixture led us to propose a model in which the 8-nitropurine is first converted to the 8-oxopurine which is further oxidized by peroxynitrite to give the observed final products. We have also provided evidence suggesting that the peroxynitrite anion, acting as a nucleophile, might be responsible for the initial conversion of the 8-nitropurine to the 8-oxopurine and that a hydroxyl radical or oxidative process is less likely to explain this conversion.

IT 105919-00-4
RL: BSU (Biological study, unclassified); FMU (Formation, unclassified); PRP (Properties); BIOL (Biological study); FORM (Formation, nonpreparative)
(peroxynitrite reacts with nitropurines to yield oxopurines)
RN 105919-00-4 CAPLUS
CN Acetic acid, 2-[[(ethylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

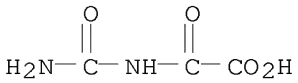
L6 ANSWER 25 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:875313 CAPLUS
DOCUMENT NUMBER: 136:218482
TITLE: Electrochemically mediated bleaching of pulp fibers
AUTHOR(S): Kim, H.-C.; Mickel, M.; Bartling, S.; Hampp, N.
CORPORATE SOURCE: Institute of Physical Chemistry, University of Marburg, Marburg, D-35032, Germany
SOURCE: Electrochimica Acta (2001), 47(5), 799-805
CODEN: ELCAAV; ISSN: 0013-4686
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Electrochem. delignification is a promising approach for the development of environmentally friendly processes in pulp bleaching. In the process described here, an electrochem. generated organic radical is used to oxidize the lignin selectively. This mol. has low mol. weight and a radical-lifetime

in the tens of minutes range when generated in water at temps. between 50 and 70°. A favorable mediator mol., which is consistent with most of the demands for a tech. process, is violuric acid (I). Delignification of .apprx.35% is obtained with 4 kg/tonpulp. The I mediator is not fully reversible in this process. The mechanism of the degradation of the mediator is still under investigation. The products generated from I during the delignification process are alloxan, parabanic acid, and oxaluric acid. A demonstration setup, which allows studying the possible tech. implementations of this electrochem. process, is described.

IT 585-05-7, Oxaluric acid
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(lignin oxidation by electrochem generated violuric acid radicals for environmental pollution control in pulp bleaching)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

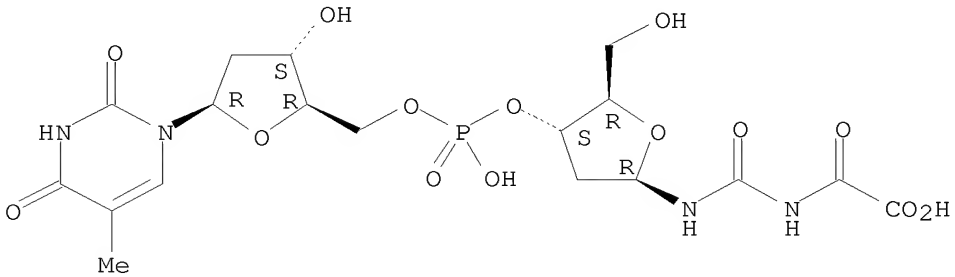
L6 ANSWER 26 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:752001 CAPLUS
DOCUMENT NUMBER: 136:200398
TITLE: Characterization of an oxaluric acid derivative as a guanine oxidation product
AUTHOR(S): Seguy, Christel; Pratviel, Genevieve; Meunier, Bernard
CORPORATE SOURCE: Laboratoire de Chimie de Coordination du CNRS, Toulouse, 31077, Fr.
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2001), (20), 2116-2117
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:200398

AB The oxidation of guanine in the dinucleoside monophosphate d(GpT) by an oxo-metalloporphyrin generates a linear oxaluric acid derivative after heating at 65 °C for 30 min and at neutral pH.

IT 400781-62-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(mol. structure of an oxaluric acid derivative as a guanine oxidation product of dinucleoside monophosphate d(GpT) by an oxo-metalloporphyrin)

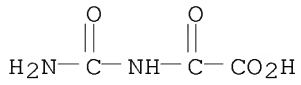
RN 400781-62-6 CAPLUS
CN 5'-Thymidylic acid, 5'→3'-ester with [[[(2-deoxy-β-D-erythro-pentofuranosyl)amino]carbonyl]amino]oxoacetic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 27 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:508104 CAPLUS
DOCUMENT NUMBER: 135:103250
TITLE: Locating Nucleobase Lesions within DNA Sequences by MALDI-TOF Mass Spectral Analysis of Exonuclease Ladders
AUTHOR(S): Tretyakova, Natalia; Matter, Brock; Ogdie, Alexis; Wishnok, John S.; Tannenbaum, Steven R.
CORPORATE SOURCE: Department of Medicinal Chemistry, University of Minnesota Cancer Center, Minneapolis, MN, 55455, USA
SOURCE: Chemical Research in Toxicology (2001), 14(8), 1058-1070
CODEN: CRTOEC; ISSN: 0893-228X
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The location of carcinogen-modified nucleobases (DNA adducts) within DNA sequences is a critical factor affecting their promutagenic properties and persistence in DNA. We now report the use of controlled exonuclease digestion followed by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) to directly map modified nucleobases within DNA. The DNA sequence is determined by mass spectral anal.
of the DNA ladders produced by sequential removal of nucleotides with either 5'→3' or 3'→5' exonuclease. Individual mononucleotides are identified from the mass differences between adjacent peaks corresponding to singly charged ions of the products of enzymic cleavage. Chemical modified nucleotides are detected and identified by their
mol. weight The resolution and mass accuracy of this approach are sufficient to
identify nucleobase modifications differing in mass by as little as 2 Da. No a priori information on the DNA sequence or adduct type is required. We demonstrate the general applicability of this method by sequencing synthetic oligonucleotides containing a range of nucleobase modifications: O6-methylguanine, peroxynitrite-induced oxidative lesions (oxaluric acid, oxazolone, cyanuric acid), and the N2-guanine adduct of (+,-)-7r,8t-dihydroxy-9t,10t-epoxy-7,8,9,10-tetrahydribenzo[a]pyrene. Sequence information is also obtained for DNA oligodeoxynucleotides containing
O6-pyridyloxobutylguanine, despite the ability of this lesion to block 3'-phosphodiesterase.
IT 585-05-7P, Oxaluric acid
RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(locating nucleobase lesions within DNA sequences by MALDI-TOF mass spectral anal. of exonuclease ladders)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 28 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:84601 CAPLUS
DOCUMENT NUMBER: 134:291401

TITLE: Repair and Mutagenic Potential of Oxaluric Acid, a Major Product of Singlet Oxygen-Mediated Oxidation of 8-Oxo-7,8-dihydroguanine

AUTHOR(S): Duarte, Victor; Gasparutto, Didier; Jaquinod, Michel; Ravanat, Jean-Luc; Cadet, Jean

CORPORATE SOURCE: Laboratoire des Lesions des Acides Nucleiques Service de Chimie Inorganique et Biologique UMR 5046 Departement de Recherche Fondamentale sur la Matiere Condensee, CEA Grenoble, Grenoble, F-38054, Fr.

SOURCE: Chemical Research in Toxicology (2001), 14(1), 46-53
CODEN: CRTOEC; ISSN: 0893-228X

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

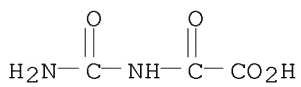
LANGUAGE: English

AB Oxidative reactions within DNA commonly result in base modifications. Among the four DNA bases, guanine is the most susceptible to various oxidants, and its related oxidized form, 8-oxo-7,8-dihydroguanine, has been extensively studied in terms of repair and mutagenicity. However, 8-oxo-7,8-dihydroguanine is readily subjected to further oxidation, and this has become a point of interest. We recently found that singlet oxygen oxidation of 8-oxo-7,8-dihydroguanine led to the predominant formation of oxaluric acid as the final product. We report herein on the biol. features of oxaluric acid dealing with in vitro DNA synthesis and its removal from DNA by repair enzymes. Nucleotide insertion opposite oxaluric acid, catalyzed by Kf exo- and Taq indicates, that oxaluric acid induces G to T and G to C transversions. On the other hand, oxaluric acid represents a block when synthesis is performed with pol β. Interestingly, DNA repair expts. carried out with formamidopyrimidine DNA N-glycosylase (Fpg) and endonuclease III (endo III) show that oxaluric acid is a substrate for both enzymes. Values of kcat/Km for the Fpg-mediated removal of oxidative guanine lesions revealed that 8-oxoGua is only a slightly better substrate than oxaluric acid. Interestingly, the results obtained with endo III suggest that oxaluric acid is a much better substrate than is 5-hydroxycytosine (5-OHC), an oxidized pyrimidine base.

IT 585-05-7, Oxaluric Acid
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(repair and mutagenic potential of oxaluric acid, major product of singlet oxygen-mediated oxidation of oxodihydroguanine)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 29 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:847281 CAPLUS

DOCUMENT NUMBER: 134:143403

TITLE: Oxaluric acid as the major product of singlet oxygen-mediated oxidation of 8-oxo-7,8-dihydroguanine in DNA

AUTHOR(S): Duarte, Victor; Gasparutto, Didier; Yamaguchi, Lydia F.; Ravanat, Jean-Luc; Martinez, Glaucia R.; Medeiros, Marisa H. G.; Di Mascio, Paolo; Cadet, Jean

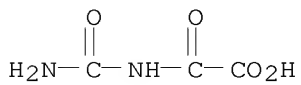
CORPORATE SOURCE: Laboratoire des Lesions des Acides Nucleiques Service de Chimie Inorganique et Biologique Departement de Recherche Fondamentale sur la Matiere Condensee, CEA Grenoble, Grenoble, F-38054, Fr.

SOURCE: Journal of the American Chemical Society (2000), 122(51), 12622-12628
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Oxidative reactions of DNA commonly result in base modifications. Among the 4 DNA bases, guanine is the most susceptible to oxidation, and 1 of its main oxidized compds., namely 8-oxo-7,8-dihydroguanine (I), has been extensively studied in terms of formation, repair, and mutagenicity. However, the latter modified purine base is readily subjected to further oxidation reactions which have recently become a matter of interest. Emphasis was placed in this work on the identification of the final singlet O oxidation products of I in single-stranded DNA. Oxaluric acid was the predominant product of the reaction. Insights in the mechanistic pattern of oxaluric acid formation were gained from isotopic labeling expts. in association with mass spectrometry measurements. Oxaluric acid is formed via an oxidized guanidinohydantoin intermediate, arising from the likely degradation of a transient 5-hydroperoxide. Two subsequent hydrolytic steps that are accompanied by the release of guanidine are likely to be involved in the formation of oxaluric acid.

IT 585-05-7P, Oxaluric acid
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); SPN (Synthetic preparation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(oxaluric acid as the major product of singlet oxygen-mediated oxidation of 8-oxo-7,8-dihydroguanine in DNA)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

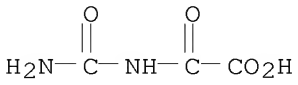
L6 ANSWER 30 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:734086 CAPLUS
DOCUMENT NUMBER: 134:247861
TITLE: Roles of the Dal82p domains in allophanate/oxalurate-dependent gene expression in Saccharomyces cerevisiae
AUTHOR(S): Scott, Stephanie; Abul-Hamd, Ashraf T.; Cooper, Terrance G.
CORPORATE SOURCE: Department of Microbiology and Immunology, University of Tennessee, Memphis, TN, 38163, USA
SOURCE: Journal of Biological Chemistry (2000), 275(40), 30886-30893
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Allophanate/oxalurate-induced gene expression in Saccharomyces cerevisiae requires at least five transcription factors, four of which act pos. (Gln3p, Gat1p, Dal81p, and Dal82p) and one neg. (Dal80p). Gln3p binds to and Gat1p is proposed to bind to single GATA sequences; Dal80p binds to pairs of specifically oriented and spaced GATA sequences, and Dal82p binds to a pathway-specific element, UISALL. Dal82p consists of at least three domains as follows: (i) UISALL DNA-binding, (ii) transcriptional activation, and (iii) coiled-coilDAL82. Here we show that the coiled-coilDAL82 domain possesses two demonstrable functions. (i) It prevents Dal82p-mediated transcription when inducer is absent. (ii) It is

a major, although not exclusive, domain through which the inducer signal is received. Supporting the latter conclusion, a 38-amino acid fragment, containing little more than the coiled-coilDAL82 domain, supports oxalurate-inducible, Dal81p-dependent, reporter gene transcription. Dal81p is required for inducer responsiveness of LexAp-Dal82p and LexAp coiled-coilDAL82-mediated transcription but is not needed for inducer-dependent activation mediated by a Dal82p containing deletions in both the coiled-coilDAL82, UISALL-binding domains. There may be an interaction between Dal81p and the coiled-coilDAL82 domain since (i) Dal81p is required for transcription mediated by LexA-coiled-coilDAL82P and (ii) a Dal81p-Dal82p complex is detected by two-hybrid assay.

IT 585-05-7
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(roles of Dal82p domains in allophanate/oxalurate-dependent gene expression in Saccharomyces cerevisiae)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



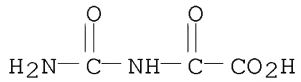
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 31 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:425918 CAPLUS
DOCUMENT NUMBER: 133:218699
TITLE: Peroxynitrite-Induced Secondary Oxidative Lesions at Guanine Nucleobases: Chemical Stability and Recognition by the Fpg DNA Repair Enzyme
AUTHOR(S): Tretyakova, Natalia Y.; Wishnok, John S.; Tannenbaum, Steven R.
CORPORATE SOURCE: Division of Bioengineering and Environmental Health and Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Chemical Research in Toxicology (2000), 13(7), 658-664
CODEN: CRTOEC; ISSN: 0893-228X
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Synthetic oligodeoxynucleotides containing secondary oxidative lesions at guanine nucleobases have been prepared by the site-specific oxidation by ONOO- of oligomers containing 8-oxoguanine (8-oxo-G). The oligomers have been tested for their stability to the standard hot piperidine treatment that is commonly used to uncover oxidized DNA lesions. While DNA containing oxaluric acid and oxazolone was cleaved at the site of modification under hot piperidine conditions, the corresponding cyanuric acid and 8-oxo-G lesions were resistant to piperidine. The recognition of the oxidative lesions by formamidopyrimidine glycosylase (Fpg enzyme) was examined in double-stranded versions of the synthetic oligodeoxynucleotides. Fpg efficiently excised 8-oxo-G and oxaluric acid and to some extent oxazolone, but not cyanuric acid. These data suggest that some DNA lesions formed via ONOO- exposures (cyanuric acid) are not repaired by Fpg and are not uncovered by assays based on piperidine cleavage at the site of lesion. Our results indicate that cryptic secondary and tertiary oxidation products arising from 8-oxo-G may contribute to the overall mutational spectra arising from oxidative stress.

IT 585-05-7, Oxaluric acid

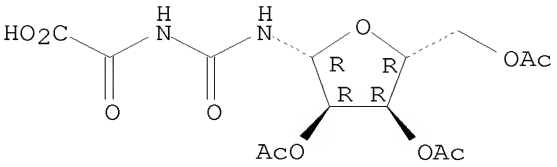
RL: BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(DNA lesion; peroxynitrite-induced secondary oxidative lesions at guanine nucleobases and chemical stability and recognition by formamidopyrimidine glycosylase DNA repair enzyme)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

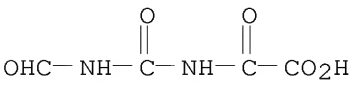
L6 ANSWER 32 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:229095 CAPLUS
DOCUMENT NUMBER: 133:43741
TITLE: A Novel Nitration Product Formed during the Reaction of Peroxynitrite with 2',3',5'-Tri-O-acetyl-7,8-dihydro-8-oxoguanosine: N-Nitro-N'-[1-(2,3,5-Tri-O-acetyl-β-D-erythro-pentofuranosyl)-2,4-dioxoimidazolidin-5-ylidene]guanidine
AUTHOR(S): Niles, Jacquin C.; Wishnok, John S.; Tannenbaum, Steven R.
CORPORATE SOURCE: Division of Bioengineering and Environmental Health and Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Chemical Research in Toxicology (2000), 13(5), 390-396
CODEN: CRTOEC; ISSN: 0893-228X
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:43741
AB A novel nitration product, formed during the reaction of peroxynitrite with 2',3',5'-tri-O-acetyl-7,8-dihydro-8-oxoguanosine, has been characterized using a combination of UV/vis, CD, and NMR spectroscopy and mass spectrometry. This compound has been identified as N-nitro-N'-[1-(2,3,5-tri-O-acetyl-β-D-erythro-pentofuranosyl)-2,4-dioxoimidazolidin-5-ylidene]guanidine (IV). Upon base hydrolysis, IV releases nitroguanidine (IVa) and an intermediate, 1-(2,3,5-tri-O-acetyl-β-D-erythro-pentofuranosyl)-5-iminoimidazolidine-2,4-dione (IVb). This intermediate is ultimately hydrolyzed to the stable 3-(2,3,5-tri-O-acetyl-β-D-erythro-pentofuranosyl)oxaluric acid (IVc). IV can be reduced by sodium borohydride to a pair of stable diastereomers (IVred). The formation of this product is rationalized in terms of initial oxidation of 2',3',5'-tri-O-acetyl-7,8-dihydro-8-oxoguanosine to a quinonoid diimine intermediate. Combination of this radical species with nitrogen dioxide results in the formation of product IV.
IT 275363-42-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(nitration product formed during the reaction of peroxynitrite with dihydrooxoguanosine)
RN 275363-42-3 CAPLUS
CN Acetic acid, oxo[[[(2,3,5-tri-O-acetyl-β-D-ribofuranosyl)amino]carbonyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 33 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:816936 CAPLUS
DOCUMENT NUMBER: 132:229376
TITLE: Photocatalysed degradation of uracil in aqueous titanium dioxide suspensions: mechanisms, pH and cadmium chloride effects
AUTHOR(S): Jaussaud, C.; Paisse, O.; Faure, R.
CORPORATE SOURCE: Laboratoire d'Instrumentation et de Chimie Analytique en Solution (LICAS), Universite Claude Bernard Lyon 1, Villeurbanne, 69622, Fr.
SOURCE: Journal of Photochemistry and Photobiology, A: Chemistry (2000), 130(2-3), 157-162
CODEN: JPPCEJ; ISSN: 1010-6030
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Upon UV irradiation, in O2 saturated aqueous titanium dioxide suspensions, uracil is almost completely mineralized. Most of the organic compds. occurring during the photodegrdn. process have been identified by means of liquid chromatog. and mass spectrometry coupled techniques (LC-MS). The first step of the mineralization leads to the formation of uracilglycol. Then, the main products generated during the photodegrdn. exhibit new functions such as polyol, carboxylic and aldehyde. The presence of urea has been clearly evidenced. At the end of the process, the ultimate step is the formation of nitrate and ammonium ions. The formation kinetics of intermediate products are modified by pH variation and CdCl2 addition
IT 106055-61-2P
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(photoproduct; photocatalyzed degradation of uracil in aqueous titanium dioxide suspensions)
RN 106055-61-2 CAPLUS
CN Acetic acid, 2-[[(formylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



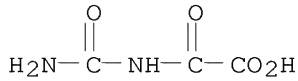
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 34 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:750890 CAPLUS
DOCUMENT NUMBER: 132:89153
TITLE: Synergistic operation of the CAR2 (ornithine transaminase) promoter elements in Saccharomyces cerevisiae
AUTHOR(S): Park, Heui-Dong; Scott, Stephanie; Rai, Rajendra; Dorrington, Rosemary; Cooper, Terrance G.
CORPORATE SOURCE: Department of Food Science and Technology, Kyungpook National University, Taegu, 702-701, S. Korea

SOURCE: Journal of Bacteriology (1999), 181(22), 7052-7064
CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Dal82p binds to the UISALL sites of allophanate-induced genes of the allantoin-degradative pathway and functions synergistically with the GATA family Gln3p and Gat1p transcriptional activators that are responsible for nitrogen catabolite repression-sensitive gene expression. CAR2, which encodes the arginine-degradative enzyme ornithine transaminase, is not nitrogen catabolite repression sensitive, but its expression can be modestly induced by the allantoin pathway inducer. The dominant activators of CAR2 transcription have been thought to be the ArgR and Mcm1 factors, which mediate arginine-dependent induction. These observations prompted the authors' to investigate the structure of the CAR2 promoter with the objectives of determining whether other transcription factors were required for CAR2 expression and, if so, of ascertaining their relative contributions to CAR2's expression and control. The authors show that Rap1p binds upstream of CAR2 and plays a central role in its induced expression irresp. of whether the inducer is arginine or the allantoin pathway inducer analog oxalurate (OXLU). The data also explain the report that ornithine transaminase production is induced when cells are grown with urea. OXLU induction derives from the Dal82p binding site, which is immediately downstream of the Rap1p site, and Da182p functions synergistically with Rap1p. This synergism is unlike all other known instances of Da182p synergism, namely, that with the GATA family transcription activators Gln3p and Gat1p, which occurs only in the presence of an inducer. The observations reported suggest that CAR2 gene expression results from strong constitutive transcriptional activation mediated by Rap1p and Dal82p being balanced by the down regulation of an equally strong transcriptional repressor, Ume6p. This balance is then tipped in the direction of expression by the presence of the inducer. The formal structure of the CAR2 promoter and its operation closely follow the model proposed for CAR1.

IT 585-05-7
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(ornithine transaminase CAR2 gene promoter transcription activation in Saccharomyces cerevisiae in response to)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

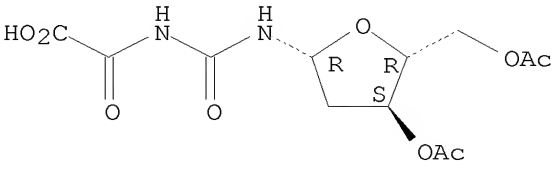


REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 35 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:684980 CAPLUS
DOCUMENT NUMBER: 132:46092
TITLE: Peroxynitrite reaction products of 3',5'-di-O-acetyl-8-oxo-7,8-dihydro-2'-deoxyguanosine
AUTHOR(S): Niles, Jacquin C.; Burney, Samar; Singh, Sukhjeet P.; Wishnok, John S.; Tannenbaum, Steven R.
CORPORATE SOURCE: Division of Bioengineering and Environmental Health, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1999), 96(21), 11729-11734
CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Of the DNA bases, peroxynitrite (ONOO-) is most reactive toward 2'-deoxyguanosine (dGuo), but even more reactive with 8-oxo-7,8-dihydro-2'-deoxyguanosine (8-oxodGuo), requiring a 1,000-fold excess of dGuo to provide 50% protection against the reaction with 8-oxodGuo. Therefore, it seems reasonable that 8-oxodGuo is a potentially important target in DNA and that the structures of the reaction products with ONOO- should be characterized. Using 3',5'-di-O-Ac-8-oxodGuo as a model compound, the reaction products with ONOO- have been isolated and identified under simulated physiol. reaction conditions (phosphate/bicarbonate buffer at pH 7.2). The major reaction product, II, is unstable and undergoes base-mediated hydrolysis to 2,5-diaminoimidazol-4-one, IIa, and 3-(3,5-di-O-Ac-2-deoxy-β-D-erythro-pentofuranosyl)-5-iminoim idazolidine-2,4-dione, IIb. The latter compound further hydrolyzes to 3-(3,5-di-O-Ac-2-deoxy-β-D-erythro-pentofuranosyl)oxaluric acid, IIc. Other products include 3-(3,5-di-O-Ac-2-deoxy-β-D-erythro-pentofuranosyl)-2,4,6-tri oxo-[1,3,5]triazinane-1-carboxamidine, I, which further hydrolyzes to 1-(3,5-di-O-Ac-2-deoxy-β-D-erythro-pentofuranosyl)cyanuric acid, Ia. 1-(3,5-Di-O-Ac-2-deoxy-β-D-erythro-pentofuranosyl)paraban ic acid, III, is a minor product that also may contribute to formation of IIc. The major products formed in these reactions are biol. uncharacterized but are similar to modified DNA bases that have been shown to be both premutagenic and blocks to DNA polymerization
IT 252743-05-8
RL: ADV (Adverse effect, including toxicity); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(peroxynitrite reaction products of 3',5'-di-O-acetyl-8-oxo-7,8-dihydro-2'-deoxyguanosine in relation to DNA damage)
RN 252743-05-8 CAPLUS
CN Acetic acid, [[[(3,5-di-O-acetyl-2-deoxy-β-D-erythro-pentofuranosyl)amino]carbonyl]amino]oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 36 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:313329 CAPLUS
DOCUMENT NUMBER: 131:180989
TITLE: DNA damage in deoxynucleosides and oligonucleotides treated with peroxynitrite
AUTHOR(S): Burney, Samar; Niles, Jacquin C.; Dedon, Peter C.; Tannenbaum, Steven R.
CORPORATE SOURCE: Department of Chemistry and Division of Bioengineering and Environmental Health, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Chemical Research in Toxicology (1999), 12(6), 513-520
CODEN: CRTOEC; ISSN: 0893-228X
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Peroxynitrite (ONOO-) is a powerful oxidizing agent that forms in a reaction of nitric oxide (NO•) and superoxide (O2-•). We have

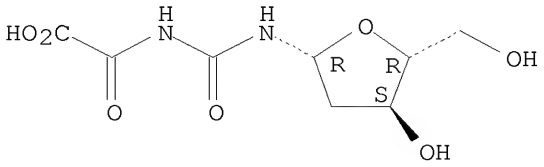
investigated ONOO--induced DNA damage using deoxynucleosides and oligonucleotides as model substrates, with particular attention paid to the oxidation of 8-oxodG by ONOO-. With regard to deoxynucleosides, ONOO- was found to have significant reactivity only with dG, dA, dC, and dT showed minimal reactivity. However, two of the major products of ONOO--induced oxidation of dG (8-oxodG and 8-nitroG) were both found to be significantly more reactive with ONOO- than with dG. In the context of an oligonucleotide, we observed a concentration-dependent oxidation of 8-oxodG to at least two types of products, one appearing at ONOO- concns. of ≤100 μM and the other at concns. of ≥500 μM. We also examined the susceptibility of these oxidation products to repair by FaPy glycosylase, endonuclease III, uracil glycosylase, and MutY. FaPy glycosylase, which recognizes 8-oxoG as its primary substrate, was the only enzyme that exhibited an efficient reaction with 8-oxodG oxidation products at low ONOO- concns. (≤100 μM); the product(s) formed at ONOO- concns. of ≥500 μM either was not recognized or was poorly repaired by the enzymes. While processing of the lesions was inefficient with endonuclease III and not apparent with uracil glycosylase, the excision of A opposite an 8-oxoG lesion by the enzyme MutY was not affected by the reaction of 8-oxoG with ONOO-. In addition to demonstrating the complexity of ONOO- DNA damage chemical, these results suggest that 8-oxodG may be a primary target of ONOO- in DNA.

IT 235439-61-9
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(peroxynitrite-induced oxidation of oxodG)

RN 235439-61-9 CAPLUS

CN Acetic acid, 2-[[[(2-deoxy-β-D-erythro-pentofuranosyl)amino]carbonyl] amino]-2-oxo- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 37 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:261266 CAPLUS

DOCUMENT NUMBER: 131:98728

TITLE: Peroxynitrite-induced reactions of synthetic oligonucleotides containing 8-oxoguanine

AUTHOR(S): Tretyakova, Natalia Yu.; Niles, Jacquin C.; Burney, Samar; Wishnok, John S.; Tannenbaum, Steven R.

CORPORATE SOURCE: Division of Bioengineering and Environmental Health and Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA

SOURCE: Chemical Research in Toxicology (1999), 12(5), 459-466
CODEN: CRTOEC; ISSN: 0893-228X

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

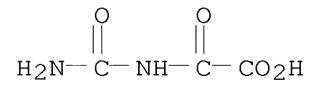
LANGUAGE: English

AB 8-Oxoguanine (8-oxo-G) is one of the most common DNA lesions present in normal tissues due to exposure to reactive oxygen species. Studies at this and other labs. suggest that 8-oxo-G is highly susceptible to secondary oxidation, making it a likely target for endogenous oxidizing agents, such as peroxynitrite (ONOO-). Synthetic oligonucleotides containing

8-oxoguanine were treated with ONOO-, and the reaction products were analyzed by liquid chromatog./electrospray ionization mass spectrometry (LC/ESI--MS). CCACAACXCAAA, CCAAAGGXAGCAG, CCAAAXGGAGCAG, and TCCCGAGCGGCCAAAGGXAGCAG (X is 8-oxo-G) were found to readily react with peroxynitrite via the same transformations as those observed for free 8-oxo-2'-deoxyguanosine. The composition of the reaction mixts. was a function of ONOO- concentration and of the storage time after exposure. The oligonucleotide products isolated at low [ONOO-]/[DNA] ratios (<5) were tentatively assigned as containing 3a-hydroxy-5-imino-3,3a,4,5-tetrahydro-1H-imidazo[4,5d]imidazol-2-one, 5-iminoimidazolidine-2,4-dione, and its hydrolytic product, oxaluric acid. At a [ONOO-]/[DNA] ratio of >10, 2,4,6-trioxo[1,3,5]triazinane-1-carboxamidine- and cyanuric acid-containing oligomers were the major products. The exact location of a modified base within a DNA sequence was determined using exonuclease digestion of oligonucleotide products followed by LC/ESI--MS anal. of the fragments. For all 8-oxo-G-containing oligomers, independent of the sequence, the reactions with ONOO- took place at the 8-oxo-G residues. These results suggest that 8-oxo-G, if present in DNA, is rapidly oxidized by peroxynitrite and that oxaluric acid is a likely secondary oxidation product of 8-oxo-G under physiol. conditions.

IT 585-05-7, Oxaluric acid
RL: BSU (Biological study, unclassified); FMU (Formation, unclassified); BIOL (Biological study); FORM (Formation, nonpreparative)
(peroxynitrite-induced reactions of synthetic oligonucleotides containing 8-oxoguanine)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

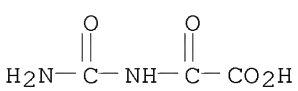
L6 ANSWER 38 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:541925 CAPLUS
DOCUMENT NUMBER: 125:267901
ORIGINAL REFERENCE NO.: 125:49849a,49852a
TITLE: Oxidative damage to DNA constituents by iron-mediated Fenton reactions. The deoxycytidine family
AUTHOR(S): Luo, Yongzhang; Henle, Ernst S.; Linn, Stuart
CORPORATE SOURCE: Division Biochemistry Molecular Biology, University California, Berkeley, CA, 94720-3202, USA
SOURCE: Journal of Biological Chemistry (1996), 271(35), 21167-21176
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Damage by iron-mediated Fenton reactions under aerobic or anaerobic conditions to deoxycytidine, deoxycytidine-5'-monophosphate, d-CpC, d-CpCpC, and dCMP residues in DNA resulted in at least 26 distinguishable products. Of these, 24 were identified by high performance liquid chromatog. retention times, radiolabeling, UV absorption spectra, chemical synthesis, fast atom bombardment mass spectrometry, high resolution fast atom bombardment mass spectrometry, and/or NMR. The nature of the products was qual. similar for each substrate except for d-CpC (and possibly d-CpCpC) under anaerobic conditions for which 5-hydroxy-deoxycytidine was uniquely present and 1-carbamoyl-1-carboxy-4-(2-deoxy-β-D-

erythropentofuranosyl)glycinamide was uniquely absent. Damage to dC, d-CpC, and d-CpCpC but not to dCMP or DNA was largely quenched by ethanol, indicating that iron is strongly associated only with dCMP and DNA. The presence of oxygen had little effect with dC or dCMP but had quant. and qual. effects with d-CpC and a significantly quant. but not a qual. effect with DNA. NADH could drive the Fenton reaction to cause damage to the dC family in vitro, consistent with a previous proposal that NADH was the reducing agent for the Fenton reaction in vivo (1988). Finally, the damage spectrum of the dC family by the Fenton reaction is compared with that by ionizing radiation and chemical mechanisms leading to the formation of the 24 identified products are proposed.

IT 585-05-7, Oxaluric acid
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(oxidative damage to DNA constituents by iron-mediated Fenton reactions and deoxycytidine family)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

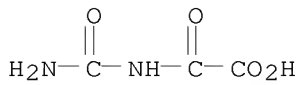


L6 ANSWER 39 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:664229 CAPLUS
DOCUMENT NUMBER: 119:264229
ORIGINAL REFERENCE NO.: 119:47105a,47108a
TITLE: Identification of products from oxidation of uric acid induced by hydroxyl radicals
AUTHOR(S): Hicks, Mark; Wong, Lisa S.; Day, Richard O.
CORPORATE SOURCE: Dep. Clin. Pharmacol. Toxicol., St. Vincent's Hosp., Darlinghurst, 2010, Australia
SOURCE: Free Radical Research Communications (1993), 18(6), 337-51
CODEN: FRRCEX; ISSN: 8755-0199
DOCUMENT TYPE: Journal
LANGUAGE: English

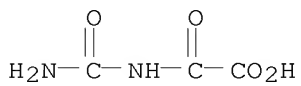
AB The aim of the present study was to sep. and characterize products formed by oxidation of uric acid by hydroxyl radicals with a view to probing for these products in vivo in clin. contexts. Aerated solns. of 200 μM uric acid, or its oxidation products, allantoin or parabanic acid, were exposed to gamma radiolysis, (52.0 Gy/min), as a source of HO· radicals, at pH 3.4 and 7.4. Aliquots were taken every 5 min for 20 min and oxidation products were separated by HPLC and analyzed with a diode array detector. Identities of oxidation products were confirmed on the basis of similarity of retention times and absorbance spectra and peak purity parameters of known stds. Hydroperoxides were measured by tri-iodide formation in the 20-min sample. Exposure of uric acid to such HO· fluxes produced a net loss of the parent compound with formation of a complex mixture of products with allantoin and parabanic acid being the predominant products at pH 3.4. The rate of uric acid degradation at physiol. pH was slower and the distribution of oxidation products was different. A small but significant amount of uric acid hydroperoxide was detected at both pHs. A mechanism for uric acid oxidation under these conditions is presented.

IT 585-05-7, Oxaluric acid
RL: ANST (Analytical study)
(uric acid oxidation product, identification of, by reversed-phase HPLC, pH in relation to)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 40 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:578807 CAPLUS
DOCUMENT NUMBER: 115:178807
ORIGINAL REFERENCE NO.: 115:30425a,30428a
TITLE: Estimation of standard Gibbs energy changes of biotransformations
AUTHOR(S): Mavrovouniotis, Michael L.
CORPORATE SOURCE: Syst. Res. Cent., Univ. Maryland, College Park, MD, 20742, USA
SOURCE: Journal of Biological Chemistry (1991), 266(22), 14440-5
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Contributions and corrections for the estimation of standard Gibbs energies are given. The group contribution method, applicable to both cyclic and acyclic compds., permits the approx. estimation of the standard Gibbs energy of a biotransformation, given the stoichiometry and structures of the metabolites involved. Estimated standard Gibbs energies of formation for a number of acyclic biochem. compds. are provided.
IT 585-05-7
RL: ANST (Analytical study)
(Gibbs energy of formation of, estimation of)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



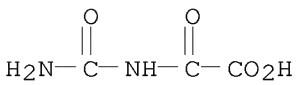
L6 ANSWER 41 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:488572 CAPLUS
DOCUMENT NUMBER: 115:88572
ORIGINAL REFERENCE NO.: 115:15143a,15146a
TITLE: Spectrophotometric determination of urea-ammonia in the urea degradation pathway of Saccharomyces cerevisiae
AUTHOR(S): Low, Christopher; Adams, Bruce G.
CORPORATE SOURCE: Dep. Microbiol., Univ. Hawaii, Manoa, Honolulu, HI, 96822, USA
SOURCE: Journal of Microbiological Methods (1990), 11(3-4), 229-39
CODEN: JMIMDQ; ISSN: 0167-7012
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Titrimetric and spectrophotometric methods demonstrate a modified Berthelot reaction to be a quant. spectrophotometric method specific for NH3-N. The indophenol chromophore has optimal absorbance at 630 nm (pH 11, pKa 8). Spectrophotometric data for urea amidolyase were collected by using a Titertek microplate scanning plate reader, and apparent Km values for urea and CO2 are in excellent agreement with data obtained with a method employing [14C]urea. The assay is rapid, sensitive, stable, and

inexpensive, with a lower limit of detection of at least 1 μM NH3 (14.1 ng NH3-N/mL). The assay detects physiol. changes as a function of imposed environment conditions and tests large nos. of samples that yield quant. results with a microplate scanning spectrophotometer.

IT 585-05-7
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(urea amidolyase of yeast response to)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 42 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:474421 CAPLUS

DOCUMENT NUMBER: 113:74421

ORIGINAL REFERENCE NO.: 113:12505a,12508a

TITLE: 2-Amino-4N-ureidopropionic acid (albizzine) and its oxalyl derivative in hyphae of Coniophora puteana

AUTHOR(S): Evans, Christine S.; Burns, Peter J.; Dutton, Martin; Brown, Sarah

CORPORATE SOURCE: Sch. Biol. Sci., Thames Polytech., London, SE18 6PF, UK

SOURCE: Phytochemistry (1990), 29(7), 2159-60
CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

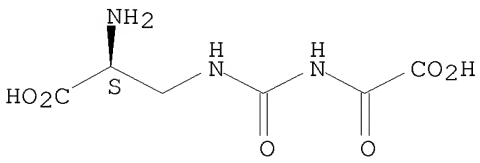
AB The non-protein amino acids, albizzine, oxalylalbizzine and 2,3-diaminopropionic acid were isolated from hyphae of C. puteana, a wood-rotting basidiomycete causing brown-rot decay.

IT 99694-81-2
RL: BIOL (Biological study)
(from Coniophora puteana)

RN 99694-81-2 CAPLUS

CN L-Alanine, 3-[[[(carboxycarbonyl)amino]carbonyl]amino]- (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 43 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:210945 CAPLUS

DOCUMENT NUMBER: 112:210945

ORIGINAL REFERENCE NO.: 112:35453a,35456a

TITLE: Action of biologically-relevant oxidizing species upon uric acid. Identification of uric acid oxidation products

AUTHOR(S): Kaur, Harparkash; Halliwell, Barry

CORPORATE SOURCE: King's Coll., Univ. London, London, WC2R 2LS, UK

SOURCE: Chemico-Biological Interactions (1990), 73(2-3), 235-47
CODEN: CBINA8; ISSN: 0009-2797

DOCUMENT TYPE: Journal

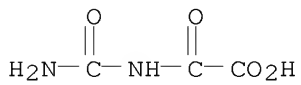
LANGUAGE: English

AB Uric acid is an end-product of purine metabolism in man and an antioxidant in vivo. Oxidative products of uric acid were measured by HPLC. Hypochlorous acid rapidly oxidized uric acid, forming allantoin, oxonic/oxaluric and parabanic acids, as well as several unidentified products. HOCl could oxidize all these products further. Hydrogen peroxide did not oxidize uric acid at detectable rates, although it rapidly oxidized oxonic acid and slowly oxidized allantoin and parabanic acids. Hydroxyl radicals generated by hypoxanthine/xanthine oxidase or Fe2+-EDTA/H2O2 systems also oxidized uric acid to allantoin, oxonic/oxaluric acid and traces of parabanic acid. Addition of ascorbic acid to the Fe2+-EDTA/H2O2 system did not increase the formation of oxidation products from uric acid, possibly because ascorbic acid can repair the radicals resulting from the initial attack of hydroxyl radicals upon uric acid. Mixts. of metHb or metmyoglobin and H2O2 also oxidized uric acid: allantoin was the major product, but some parabanic and oxonic/oxaluric acids were also produced. Caeruloplasmin did not oxidize uric acid under physiol. conditions, although simple Cu2+ could, but this was prevented by albumin or histidine. The possibility of using oxidation products of uric acid, such as allantoin, as an index of oxidant generation in vivo in humans is discussed.

IT 585-05-7, Oxaluric acid
RL: FORM (Formation, nonpreparative)
(formation of, by oxidation of uric acid)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 44 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

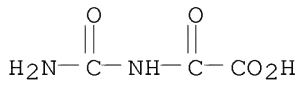
ACCESSION NUMBER: 1990:113436 CAPLUS
DOCUMENT NUMBER: 112:113436
ORIGINAL REFERENCE NO.: 112:19099a,19102a
TITLE: The GLN3 gene product is required for transcriptional activation of allantoin system gene expression in Saccharomyces cerevisiae
AUTHOR(S): Cooper, Terrance G.; Ferguson, Denise; Rai, Rajendra; Bysani, Nanda
CORPORATE SOURCE: Dep. Microbiol. Immunol., Univ. Tennessee, Memphis, TN, 38163, USA
SOURCE: Journal of Bacteriology (1990), 172(2), 1014-18
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Mutation at the GLN3 locus resulted in decreased steady-state levels of DAL7, DUR1,2, CAR1, and URA3 mRNAs derived from cultures grown in the presence of inducer. Basal levels of these RNA species, however, were not significantly affected by a gln3 mutation. The GLN3 product appears to affect gene expression in 2 ways. The pleiotropic requirement of GLN3 for induced gene expression probably derives from the need of the GLN3 product for inducer uptake into the cell and its loss in gln3 mutants. Transcriptional activation, mediated by the DAL5 and DAL7 upstream activation sequences, requires a functional GLN3 gene product. This observation identified transcriptional activation as the most likely point of GLN3 participation in the expression of allantoin system genes.

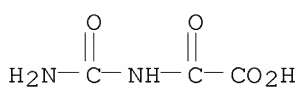
IT 585-05-7
RL: PROC (Process)
(uptake of, by Saccharomyces cerevisiae, gene GLN3 in relation to)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

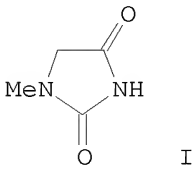


L6 ANSWER 45 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:95277 CAPLUS
DOCUMENT NUMBER: 112:95277
ORIGINAL REFERENCE NO.: 112:16135a,16138a
TITLE: An inducible allantoinase and the specific toxicity of parabanic acid on allantoin utilization in a Rhizobium species
AUTHOR(S): Rao, N. Venkateswara; Reddy, R. Subhash; Sastry, K. Sivarama
CORPORATE SOURCE: Dep. Biochem., Osmania Univ., Hyderabad, India
SOURCE: Current Microbiology (1990), 20(2), 115-19
CODEN: CUMIDD; ISSN: 0343-8651
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Rhizobium strain NC 92 utilizes uric acid, allantoin, allantoate, urea, and oxaluric acid as sole N sources. Allantoinase is repressible by NH4+ and inducible by allantoin and, less efficiently, by uric acid, oxaluric acid, and allophanate, but not by urea or parabanic acid. This allantoinase (purified .apprx.50-fold to homogeneity) is of 166 Kd mol. weight, is optimally active at pH 7.5, has a Km of 4.16 mM and no requirement for SH groups or metal ions, and is competitively inhibited by acetohydroxamate. Parabanic acid is nontoxic to Rhizobium NC 92 on inorg. N and is highly toxic to growth on allantoin N. Growth inhibition is reversed by supplemented allantoin, and suggestive evidence indicates that NC 92 metabolizes allantoin via the pathway allantoin → allantoate →→ urea → NH3; allophanate is not an intermediate. Anal. of allantoinase induction indicates that the mandatory structural requirement is for a free urea moiety in an inducing mol.
IT 585-05-7, Oxaluric acid
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, by Rhizobium)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



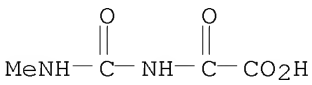
L6 ANSWER 46 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:404790 CAPLUS
DOCUMENT NUMBER: 111:4790
ORIGINAL REFERENCE NO.: 111:931a,934a
TITLE: The stepwise mammalian oxidation of the hydantoin 1-methylimidazolidine-2,4-dione into methylimidazolidinetrione via 5-hydroxy-1-methyl-imidazolidine-2,4-dione
AUTHOR(S): Ienaga, Kazuharu; Nakamura, Ko; Ishii, Akira; Taga, Tooru; Miwa, Yoshihisa; Yoneda, Fumio
CORPORATE SOURCE: Inst. Bio-Active Sci., Nippon Zoki Pharm. Co. Ltd., Hyogo, 673-14, Japan
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (

1989), (6), 1153-6
CODEN: JCPRB4; ISSN: 0300-922X
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The metabolism of 1-methylhydantoin (I) by rabbits is described. The major and general route in mammals proceeds by consecutive oxidns. of I to 5-hydroxy-I and then to 1-methylparabanic acid. Since the 1st oxidation proved to be stereoselective, the step was thought to be enzymic. Although the enantiomeric products could not be separated directly, the mixture was converted into (S)- and (R)-5-(N-Z-L-prolyloxy)-I forms which proved separable and were identified by x-ray anal. of the (R)-diastereoisomer. The ratio of the (S)- to (R)-form was .apprx.3:1. The 2nd product, 1-methylparabanic acid, then undergoes regioselective ring fission to form the methyloxaluric acid (CH3NHCONHCOCOOH), which is then hydrolyzed to yield oxalic acid and N-methylurea. Two minor oxidative routes from the substrate I into sarcosine and parabanic acid were also shown to exist.
IT 89281-42-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, methylhydantoin metabolism in relation to)
RN 89281-42-5 CAPLUS
CN Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)

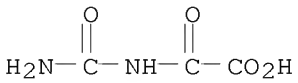


L6 ANSWER 47 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:131589 CAPLUS
DOCUMENT NUMBER: 110:131589
ORIGINAL REFERENCE NO.: 110:21643a,21646a
TITLE: A simple liquid-chromatographic method for measuring vitamin B6 compounds in plasma
AUTHOR(S): Edwards, Paul; Liu, Peter K. S.; Rose, G. Alan
CORPORATE SOURCE: Biochem. Res. Lab., St. Peter's Hosp., London, WC2, UK
SOURCE: Clinical Chemistry (Washington, DC, United States) (1989), 35(2), 241-5
CODEN: CLCHAU; ISSN: 0009-9147
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A relatively simple reversed-phase HPLC method based on the bisulfite derivatization technique of S. P. Coburn and J. D. Mahuren (1983) was used for measuring all 7 known forms of vitamin B6 in plasma from individuals supplemented with pyridoxine-HCl, and the method showed good anal. recovery (85-98%) and precision. Within-run and between-run relative standard deviations for plasmas supplemented with stds. were 4 and 7%, resp. The major forms of B6 found in unsupplemented plasma from normal subjects were pyridoxal phosphate and 4-pyridoxic acid, with pyridoxal just detectable.

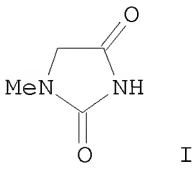
The HPLC procedure correlated well with a modification of an enzymic method involving apotryptophanase for measuring plasma pyridoxal phosphate, and also (r = 0.94) with a routine method for determining 4-pyridoxic acid in urine. Elimination of pyridoxine from the plasma of both normal and hyperoxaluric individuals was very rapid, with half-lives of 45 and 40 min, resp. Finally, evidence is presented for the existence of 2 other forms of B6 and the possibility of a new metabolic pathway in vitamin B6 metabolism is discussed.

IT 585-05-7, Oxaluric acid
RL: ANST (Analytical study)
(metabolic disorders, hyperoxaluria, pyridoxine elimination from blood of human with)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 48 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:92892 CAPLUS
DOCUMENT NUMBER: 110:92892
ORIGINAL REFERENCE NO.: 110:15321a,15324a
TITLE: The metabolism of 1-methylhydantoin via 5-hydroxy-1-methylhydantoin in mammals
AUTHOR(S): Ienaga, Kazuharu; Nakamura, Ko; Naka, Fujio; Goto, Toshio
CORPORATE SOURCE: Inst. Bio-Active Sci., Nippon Zoki Pharm. Co., Ltd., Hyogo, Japan
SOURCE: Biochimica et Biophysica Acta, General Subjects (1988), 967(3), 441-3
CODEN: BBGSB3; ISSN: 0304-4165
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

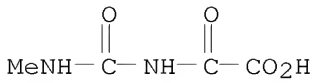


I

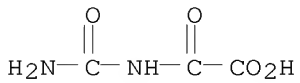
AB The metabolic pathway of 1-methylhydantoin (I) via 5-hydroxy-1-methylhydantoin, methylparabanic acid, and N5-methyloxaluric acid was proven in rabbits and rats. I is not normally formed in healthy animals but may arise from microparasitic creatinine deiminase (EC 3.5.4.21) during infections.

IT 89281-42-5
RL: BIOL (Biological study)
(as creatinine metabolite formed via methylhydantoin in infection)

RN 89281-42-5 CAPLUS
CN Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 49 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:20383 CAPLUS
DOCUMENT NUMBER: 110:20383
ORIGINAL REFERENCE NO.: 110:3417a,3420a
TITLE: Structural requirements of alloxan and ninhydrin for glucokinase inhibition and of glucose for protection against inhibition
AUTHOR(S): Lenzen, Sigurd; Brand, Franz Hermann; Panten, Uwe
CORPORATE SOURCE: Inst. Pharmacol. Toxicol., Univ. Goettingen, Goettingen, D-3400, Fed. Rep. Ger.
SOURCE: British Journal of Pharmacology (1988), 95(3), 851-9
CODEN: BJPCBM; ISSN: 0007-1188
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Glucose and alloxan competing for the sugar-binding site of glucokinase from pancreatic B-cells or liver was elucidated by determining the structural requirements of the enzyme for inhibition by alloxan and for protection by glucose. With a half-maximal inhibitory concentration of 5 μM, alloxan was the most potent pyrimidine derivative inhibitor of glucokinase. Uramil was a less potent enzyme inhibitor. A variety of other pyrimidine derivs. and related substances were ineffective. Ninhydrin also inhibited glucokinase with a half-maximal inhibitory concentration of 5 μM. Isatin was a slightly less potent enzyme inhibitor. Several other indoline derivs. were ineffective. Only glucose derivs. with a sufficiently bulky substituent in position C-2, such as the glucokinase substrates glucose and mannose and the inhibitors mannoheptulose, glucosamine, and N-acetylglucosamine, protected glucokinase against inhibition by alloxan by binding to the active site of the enzyme. Glucose epimers which differed in other positions did not protect the enzyme against alloxan inhibition. Dithiothreitol protected glucokinase against inhibition by alloxan and reversed the inhibition of the enzyme induced by alloxan. Thus, the mechanism of glucokinase inhibition by alloxan and other inhibitors, such as uramil and ninhydrin, is an oxidation of functionally essential SH groups of the enzyme, where the most reactive keto group of the inhibitor acts as the H acceptor. The protective action of glucose and several C-2 epimers demonstrates that these functionally essential SH groups are situated in the sugar-binding site of the glucokinase. The pancreatic B-cell glucokinase is probably the major target mediating the inhibition of insulin secretion by alloxan.
IT 585-05-7, Oxaluric acid
RL: BIOL (Biological study)
(glucokinase of pancreatic β-cell inhibition by, structure in relation to)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

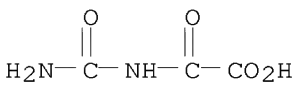


L6 ANSWER 50 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1988:163813 CAPLUS
DOCUMENT NUMBER: 108:163813

ORIGINAL REFERENCE NO.: 108:26839a,26842a
TITLE: Allantoinases of nodulated Arachis hypogaea
AUTHOR(S): Rao, N. Venkateswara; Reddy, R. Subhash; Sastry, K. Sivarama
CORPORATE SOURCE: Dep. Biochem., Osmania Univ., Hyderabad, India
SOURCE: Phytochemistry (1988), 27(3), 693-5
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nodulated A. hypogaea plants contain an allantoinase in the nodules that is different from the host tissue enzyme. The root and nodule allantoinases were purified 10- and 15-fold, resp. They exhibited Km values of 25 (root) and 8.7 mM (nodule) for allantoin. Nodule allantoinase exhibits 2 pH optima, a major one at pH 6 and a minor one at pH 4. It is also specifically inhibited by parabanic acid and to a lesser extent by oxaluric acid. Arachis Root allantoinse, on the other hand, has 1 pH optimum at pH 7.2 and is not inhibited by parabanic acid or oxaluric acid.

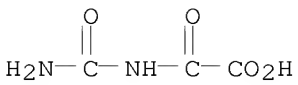
IT 585-05-7, Oxaluric acid
RL: BIOL (Biological study)
(allantoinase isoform of Arachis hypogaea nodule inhibition by, root isoform in relation to)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



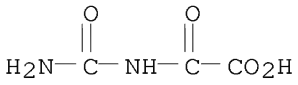
L6 ANSWER 51 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:636345 CAPLUS
DOCUMENT NUMBER: 107:236345
ORIGINAL REFERENCE NO.: 107:37957a,37960a
TITLE: The sonolysis of cytosine and thymine
AUTHOR(S): Yu, Tain Jen; Sutherland, Ronald G.; Verrall, Ronald E.
CORPORATE SOURCE: Dep. Chem., Univ. Saskatchewan, Saskatoon, SK, S7N 0W0, Can.
SOURCE: Canadian Journal of Chemistry (1987), 65(6), 1162-4
CODEN: CJCHAG; ISSN: 0008-4042
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 107:236345

AB Sonolysis of cytosine was studied at 630 kHz in the presence of air and N. The degradation products were identified by gas chromatog.-mass spectral anal.
Under aerated conditions the following products were found: urea, formyl urea, parabanic acid, isobarbituric acid, oxaluric acid, alloxan monohydrate, alloxantin, dialuric acid, and uracil glycols. Under N the degradation products were isobarbituric acid, alloxan monohydrate, and uracil
glycols. Sonolysis of thymine in the presence of air was reinvestigated and a previously reported, unidentified, product may be 5-hydroxy-5-methylbarbituric acid. A mechanism for the sonolytic degradation
of cytosine is proposed.

IT 585-05-7P, Oxaluric acid
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in sonolysis of cytosine)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 52 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:632807 CAPLUS
DOCUMENT NUMBER: 107:232807
ORIGINAL REFERENCE NO.: 107:37343a,37346a
TITLE: Allantoin transport in Saccharomyces cerevisiae is regulated by two induction systems
AUTHOR(S): Cooper, Terrance G.; Chisholm, Vanessa T.; Cho, Hyo Jeong; Yoo, Hyang Sook
CORPORATE SOURCE: Dep. Microbiol. Immunol., Univ. Tennessee, Memphis, TN, 38163, USA
SOURCE: Journal of Bacteriology (1987), 169(10), 4660-7
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The allantoin transport system of S. cerevisiae responds to two induction systems, one mediated by allophanate or its analog oxalurate and the other mediated by allantoin or its analog hydantoin acetate. The effects of the two inducers were additive in strain M85. Like other allantoin pathway genes, oxalurate-mediated induction of allantoin transport required a functional Dal81 gene product. Hydantoin acetate-mediated induction of the system, on the other hand, occurred normally in dal81 mutants. This suggests that induction was not only mediated by two sep. inducers, but also involved different regulatory proteins. Induction is probably a transcriptionally regulated process, because addition of hydantoin acetate or oxalurate to the culture medium increased the steady-state levels of mRNA encoded by a gene required for allantoin transport (Dal4).
IT 585-05-7
RL: BIOL (Biological study)
(allantoin transport system induction by, Saccharomyces cerevisiae gene DAL81 in)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

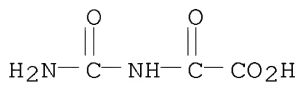


L6 ANSWER 53 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:587351 CAPLUS
DOCUMENT NUMBER: 105:187351
ORIGINAL REFERENCE NO.: 105:30173a,30176a
TITLE: Control of enzyme synthesis in the oxalurate catabolic pathway of Streptococcus faecalis ATCC 11700: evidence for the existence of a third carbamate kinase
AUTHOR(S): Vander Wauven, Corinne; Simon, Jean Paul; Slos, Philippe; Stalon, Victor
CORPORATE SOURCE: Inst. Rech., CERIA, Belg.
SOURCE: Archives of Microbiology (1986), 145(4), 386-90
CODEN: AMICCW; ISSN: 0302-8933
DOCUMENT TYPE: Journal
LANGUAGE: English
AB S. faecalis ATCC 11700 uses oxalurate as a sole energy source for growth. An oxamate carbamoyltransferase and a carbamate kinase, both induced by

oxalurate, are involved in this process. The oxalurate-induced kinase is specific for the pathway. Its properties are different from those of the previously characterized agmatine- and arginine-induced kinases. Glucose, but not arginine nor agmatine, 2 other energy sources, represses the oxalurate pathway. In contrast, oxalurate was at least as effective as glucose in repressing the arginine deiminase pathway in arginine-grown cells, or the agmatine deiminase pathway during growth on agmatine.

IT 585-05-7
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, by Streptococcus faecalis, carbamate kinase activity in)

RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

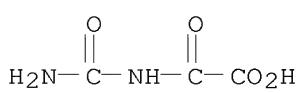


L6 ANSWER 54 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:421424 CAPLUS
DOCUMENT NUMBER: 105:21424
ORIGINAL REFERENCE NO.: 105:3545a,3548a
TITLE: Dual regulation of the allantoin permease in Saccharomyces cerevisiae
AUTHOR(S): Cooper, Terrance G.; Chisholm, Vanessa T.; Cho, Hyo Jeong; Yoo, Hyang Sook
CORPORATE SOURCE: Cent. Health Sci., Univ. Tennessee, Memphis, TN, 38163, USA
SOURCE: Microbiology (Washington, D. C.) (1986) 242-5
CODEN: MICRDG; ISSN: 0098-1540
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Allantoin transport in S. cerevisiae was induced by oxalurate and hydantoin acetate. The ability of oxalurate to support induction required DAL81 gene product that was required for induction of the allantoin pathway enzymes. In contrast, induction by hydantoin acetate did not require participation of Dal81 gene. This suggested that the allantoin transport system is regulated by a dual induction system consisting of 2 inducers which operate via 2 sep. regulatory systems consisting of different elements. Cloning and expression of DAL4 gene are reviewed and discussed.

IT 585-05-7
RL: BIOL (Biological study)
(allantoin transport by Saccharomyces cerevisiae induction by)

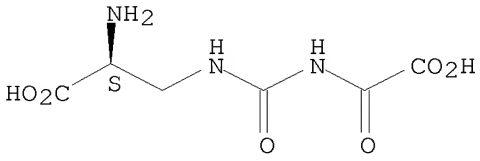
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



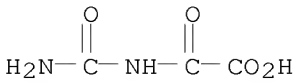
L6 ANSWER 55 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:31737 CAPLUS
DOCUMENT NUMBER: 104:31737
ORIGINAL REFERENCE NO.: 104:5157a,5160a
TITLE: 2-Amino-4-acetylaminobutyric acid, 2,4-diaminobutyric acid and 2-amino-6N-oxalylureidopropionic acid (oxalylalbizziine) in seeds of Acacia angustissima
AUTHOR(S): Evans, Christine S.; Clardy, Jon; Hughes, Philip F.;

Bell, E. Arthur
CORPORATE SOURCE: Sch. Biol. Sci., Thames Polytech., London, SE18 6PF, UK
SOURCE: Phytochemistry (Elsevier) (1985), 24(10), 2273-5
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new amino acid previously detected in 17 species of Acacia was isolated from seeds of A. angustissima and identified as oxalylalbizziine. These seeds also contain >6% dry weight of 2-amino-4-acetylaminobutyric acid, which has not been reported previously in a legume, and lower concns. of 2,4-diaminobutyric acid.
IT 99694-81-2
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(of Acacia angustissima, isolation and structure of)
RN 99694-81-2 CAPLUS
CN L-Alanine, 3-[[[(carboxycarbonyl)amino]carbonyl]amino]- (CA INDEX NAME)

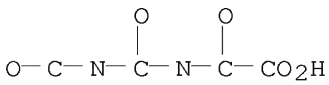
Absolute stereochemistry.



L6 ANSWER 56 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1983:212395 CAPLUS
DOCUMENT NUMBER: 98:212395
ORIGINAL REFERENCE NO.: 98:32243a,32246a
TITLE: Reduction of oxalogenesis in a rapid gas chromatographic procedure for the analysis of oxalate ion in urine
AUTHOR(S): Moye, H. Anson; Malagodi, Marjorie H.; Clarke, Dorothy H.
CORPORATE SOURCE: Dep. Food Sci. Hum. Nutr., Univ. Florida, Gainesville, FL, 32611, USA
SOURCE: Clinica Chimica Acta (1983), 129(3), 385-90
CODEN: CCATAR; ISSN: 0009-8981
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Enzymic degradation of urinary oxalic acid by oxalate decarboxylase prior to derivatization was used to document the contribution of oxalogenic compds., e.g., oxamic acid, oxaluric acid, and parabanic acid, to the oxalic acid measured by the gas chromatog. method of H. A. Moye et al. (1981), and a modified method was developed which minimized interference from the oxalogenic compds. When derivatization was done at 25° or 80°, all compds. examined produced GC peaks having the same retention as the bis-2-chloroethyl ester of oxalic acid. However, conversion was significantly greater at 80° (30 min), and this was probably due to heat-induced conversion of the oxalogenic compds. to oxalic acid. Therefore, the original derivatization conditions (80° for 30 min) were changed to 25° for 60 min.
IT 585-05-7
RL: ANST (Analytical study)
(interference by, in oxalate determination in human urine by gas chromatog.)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



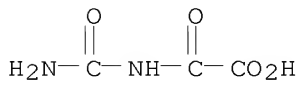
L6 ANSWER 57 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1982:77430 CAPLUS
DOCUMENT NUMBER: 96:77430
ORIGINAL REFERENCE NO.: 96:12603a,12606a
TITLE: On the ESR detection of the σ-radical RNHCO· in irradiated crystals of 5,5-dihydroxybarbituric acid (alloxan) trihydrate
AUTHOR(S): Sagstuen, Einar; Skjaervoe, Halvard
CORPORATE SOURCE: Inst. Phys., Univ. Oslo, Oslo, Norway
SOURCE: Journal of Chemical Physics (1981), 75(12), 5627-9
CODEN: JCPSA6; ISSN: 0021-9606
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In single crystals of 5,5-dihydroxybarbituric acid (alloxan) trihydrate, an ESR absorption was observed after irradiation at 77 K which is ascribed to the σ-radical RNHCO. Its spectral parameters are described and compared to those from the structurally similar σ-acyl radical in malonic and succinic acid. The radical is formed from the primary oxidation product RCO.(OH) through electronic rearrangements leading to an opening of the pyrimidine ring.
IT 80731-17-5P
RL: PREP (Preparation)
(formation and ESR detection of, in irradiated single crystals of alloxan trihydrate)
RN 80731-17-5 CAPLUS
CN Methyl, [[[(carboxycarbonyl)amino]carbonyl]amino]oxo- (9CI) (CA INDEX NAME)



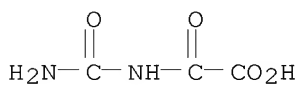
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

L6 ANSWER 58 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1982:3411 CAPLUS
DOCUMENT NUMBER: 96:3411
ORIGINAL REFERENCE NO.: 96:611a,614a
TITLE: L-Ornithine transaminase synthesis in Saccharomyces cerevisiae: induction by allophanate, intermediate and inducer of the urea degradative pathway adds to arginine induction
AUTHOR(S): Hennaut, Claudette
CORPORATE SOURCE: Inst. Rech., CERIA, Brussels, B-1070, Belg.
SOURCE: Current Genetics (1981), 4(1), 69-72
CODEN: CUGED5; ISSN: 0172-8083
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Yeast ornithine transaminase is induced by arginine and ornithine, through the action of regulatory elements common to arginase induction. Ornithine transaminase is subject to a 2nd induction circuit, that which is responsible for urea amidolyase and urea permease induction by allophanate and defined by the regulatory mutants durL- and durM-.
IT 585-05-7
RL: BIOL (Biological study)

(ornithine transaminase induction by, in Saccharomyces cerevisiae)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 59 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1981:421015 CAPLUS
DOCUMENT NUMBER: 95:21015
ORIGINAL REFERENCE NO.: 95:3653a,3656a
TITLE: Repression of catabolic NAD-specific glutamate dehydrogenase of Saccharomyces cerevisiae by arginine, allantoin and urea
AUTHOR(S): Middelhoven, W. J.; Hoogkamer-Te Niet, Mieke C.
CORPORATE SOURCE: Lab. Microbiol., Landbouwhogesch., Wageningen, 6703 CT, Neth.
SOURCE: FEMS Microbiology Letters (1981), 10(4), 307-11
CODEN: FMLED7; ISSN: 0378-1097
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The repression of NAD-specific glutamate dehydrogenase (GDH-B) by allantoin, arginine, and urea was examined in S. cerevisiae wild-type and mutant strains during growth on L-alanine, 4-aminobutyric acid, L-aspartic acid, L-glutamic acid, and L-proline as sole N sources. Allantoin, arginine, and urea were low-mol.-weight repressors of GDH-B; no further metabolism to NH3 and glutamine was required for repression. GDH-B formation was also repressed by the nonmetabolizable analogs homoarginine, hydantoate, and oxalurate. Repression of GDH-B by arginine was independent of gene argR. Patterns of repression suggested that simultaneous intracellular accumulation of arginine and urea was required for significant repression of GDH-B in the presence of 4-aminobutyric acid. The biochem. of GDH-B repression is discussed.
IT 585-05-7
RL: BIOL (Biological study)
(NAD-specific glutamate dehydrogenase repression by, in Saccharomyces cerevisiae)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 60 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1981:98145 CAPLUS
DOCUMENT NUMBER: 94:98145
ORIGINAL REFERENCE NO.: 94:15939a,15942a
TITLE: The sonolysis of uracil
AUTHOR(S): Yu, Tain-Jen; Sutherland, Ronald G.; Verrall, Ronald E.
CORPORATE SOURCE: Dep. Chem. Chem. Eng., Univ. Saskatchewan, Saskatoon, SK, S7N 0W0, Can.
SOURCE: Canadian Journal of Chemistry (1980), 58(18), 1909-15
CODEN: CJCHAG; ISSN: 0008-4042
DOCUMENT TYPE: Journal

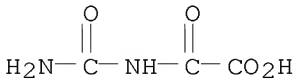
LANGUAGE: English

AB The sonolysis of uracil was studied at 630 kHz in the presence of air, O, N, and Ar. The degradation products were identified by gas chromatog.-mass spectrometry anal. Under aerated conditions the following products were found: uracil glycols (I), isobarbituric acid (II), N-formyl-N'-glyoxyurea (III), 5-hydroxyhydantoin (IV), dialuric acid (V), alloxan monohydrate (VI), parabanic acid (VII), and oxaluric acid (VIII). In deaerated solns., III, VII, and VIII were not observed, but either 6-hydroxy-5,6-dihydrouracil or its isomer were detected in addition to I, II, IV, V, and VI. The observed products were used to develop a possible mechanism for the sonolytic degradation and the results are similar to those obtained in radiolysis. The sonolytic degradation of 5-bromouracil is also reported; the products observed were 5-bromobarbituric acid, IV, VI, VII, and VIII, and these can be rationalized by a similar mechanistic scheme.

IT 585-05-7
RL: BIOL (Biological study)
(as uracil sonolytic degradation product)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 61 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:634263 CAPLUS

DOCUMENT NUMBER: 93:234263

ORIGINAL REFERENCE NO.: 93:37443a,37446a

TITLE: Analytical isotachophoresis: a rapid and sensitive method for determination of urinary oxalate

AUTHOR(S): Schmidt, K.; Hagmaier, V.; Bruchelt, G.; Rutishauser, G.

CORPORATE SOURCE: Dep. Surg., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.

SOURCE: Urological Research (1980), 8(3), 177-80
CODEN: URLRA5; ISSN: 0300-5623

DOCUMENT TYPE: Journal

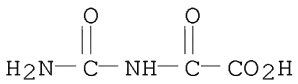
LANGUAGE: English

AB Complete separation of the oxalate anion from accompanying ions is achieved in an 800 + 0.5 mm PTFE capillary between 2 electrodes according to differences in the net mobility. To lower the ionic strength of urine and reduce anal. time, oxalate was precipitated by CaCl2 before anal. The separated compds. were detected by thermosignal and UV absorbance at 254 nm. Short anal. time, little pretreatment of the urine samples, and high resolving power and accuracy are the significant advantages of this newly developed method. This new technique was of significant value in studying the role of oxalate in urinary stone disease.

IT 585-05-7
RL: ANT (Analyte); ANST (Analytical study)
(detection of, in urine by isotachophoresis)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 62 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1980:408132 CAPLUS
DOCUMENT NUMBER: 93:8132
ORIGINAL REFERENCE NO.: 93:1495a,1498a
TITLE: Activation and transfer of oxygen. XV. Evidence for the transient opening of the pyrazine ring in N1- and N5-alkylflavin models, 4A- to 10A-Adduct isomerization and pyrazine and pyrimidine ring contractions
AUTHOR(S): Mager, H. I. X.
CORPORATE SOURCE: Biochem. Biophys. Lab., Univ. Technol., Delft, 2628 BC, Neth.
SOURCE: Tetrahedron Letters (1979), (37), 3549-52
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

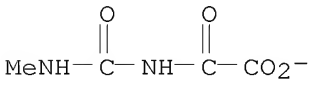
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The equilibrium of the hydroxy pseudobase I with the blue intermediate II was confirmed by the isolation of 1-methylbenzimidazole from spontaneously bleached solns. of II. Similarly, the flavinium cation III with OH- gave the 4a-adduct IV which underwent ring contraction to the spirohydantoin V via a carbonyl oxide, isomerization to the 10a-adduct VI, and pyrazine ring cleavage and contraction to the benzimidazolinium salts VII and VIII. VII and VIII are also formed from VI. VI also underwent ring contraction to the spirohydantoin IX.

IT 73813-80-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 73813-80-6 CAPLUS
CN 1H-Benzimidazolium, 1-ethyl-3,5,6-trimethyl-, salt with [[(methylamino)carbonyl]amino]oxoacetic acid (1:1) (9CI) (CA INDEX NAME)

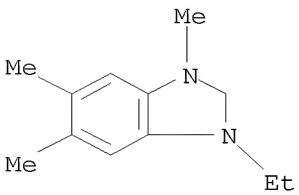
CM 1

CRN 73813-79-3
CMF C4 H5 N2 O4



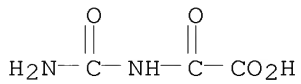
CM 2

CRN 73813-78-2
CMF C12 H17 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

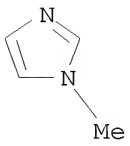
L6 ANSWER 63 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1979:589498 CAPLUS
DOCUMENT NUMBER: 91:189498
ORIGINAL REFERENCE NO.: 91:30475a,30478a
TITLE: Oxalurate transport in Saccharomyces cerevisiae
AUTHOR(S): Cooper, Terrance G.; McKelvey, Joyce; Sumrada, Roberta
CORPORATE SOURCE: Dep. Biol. Sci., Univ. Pittsburgh, Pittsburgh, PA, 15260, USA
SOURCE: Journal of Bacteriology (1979), 139(3), 917-23
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Oxalurate, the gratuitous inducer of the allantoin degradative enzymes, was taken into the yeast cell by an energy-dependent active transport system with an apparent Km of 1.2 mM. Efflux of previously accumulated oxalurate was rapid, with a half-life of .apprx.2 min. The oxalurate uptake system appears to be both constitutively produced and insensitive to N catabolite repression. The latter observations suggest that failure of oxalurate to bring about induction of allophanate hydrolase in cultures growing under repressive conditions does not result from inducer exclusion, but rather from repression of dur1,2 gene expression.
IT 585-05-7
RL: PROC (Process)
(transport of, in Saccharomyces cerevisiae)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 64 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1979:144533 CAPLUS
DOCUMENT NUMBER: 90:144533
ORIGINAL REFERENCE NO.: 90:22840h,22841a
TITLE: [Crystal structure of] 1-methylimidazolium oxalurate
AUTHOR(S): Wang, Albert C.; Craven, B. M.
CORPORATE SOURCE: Crystallogr. Dep., Univ. Pittsburgh, Pittsburgh, PA, USA
SOURCE: Acta Crystallographica, Section B: Structural Crystallography and Crystal Chemistry (1979), B35(2), 510-13
CODEN: ACBCAR; ISSN: 0567-7408
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The title compound is triclinic, space group P.hivin.1, with a 7.718(4), b 8.062(4), c 9.603(4) Å, α 69.34(4), β 62.52(4), and γ 67.22(4)°; d.(exptl.) = 1.490 for Z = 2. The structure determination was based on the x-ray intensities (Mo Kα) of 1779 reflections collected by diffractometer. Parameter refinement by the full-matrix least-squares method gave R = 0.058. The longer carboxylate C-O bond (1.259 vs. 1.230 Å) involves the O atom which forms the salt bridge (NH...O 2.78 Å) and another H bond.
IT 69723-06-4
RL: PRP (Properties)
(crystal structure of)
RN 69723-06-4 CAPLUS
CN Acetic acid, [(aminocarbonyl)amino]oxo-, compd. with 1-methyl-1H-imidazole (1:1) (9CI) (CA INDEX NAME)

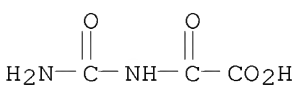
CM 1

CRN 616-47-7
CMF C4 H6 N2

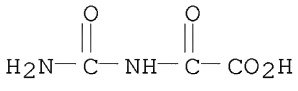


CM 2

CRN 585-05-7
CMF C3 H4 N2 O4

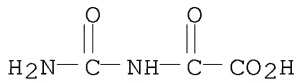


L6 ANSWER 65 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1978:85431 CAPLUS
DOCUMENT NUMBER: 88:85431
ORIGINAL REFERENCE NO.: 88:13401a,13404a
TITLE: Separation of low-molecular weight purine electrooxidation products from phosphate buffers
AUTHOR(S): Owens, James L.; Thomas, Hazel H.; Dryhurst, Glenn
CORPORATE SOURCE: Dep. Chem., Univ. Oklahoma, Norman, OK, USA
SOURCE: Analytica Chimica Acta (1978), 96(1), 89-97
CODEN: ACACAM; ISSN: 0003-2670
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two chromatog. methods were developed to sep. quant. a number of organic compds.
such as alloxan, urea, allantoin, parabanic acid, oxaluric acid, and D-ribose from relatively large amts. of inorg. phosphate. These organic compds. are representative of typical products expected upon electrochem. oxidation of various purine derivs. that may be themselves separated from each
other by liquid chromatog. with phosphate buffers. The phosphate may subsequently be separated from the organic components either by use of a Sephadex
G 10 gel permeation column with water or very dilute HCl as the eluant or by use of a MeOH-washed column of a strong cation-exchange resin with MeOH as eluant.
IT 585-05-7
RL: ANST (Analytical study)
(separation of, from inorg. phosphate, chromatog.)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 66 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1978:34018 CAPLUS

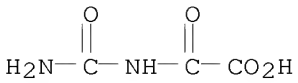
DOCUMENT NUMBER: 88:34018
ORIGINAL REFERENCE NO.: 88:5351a,5354a
TITLE: Liquid chromatographic separation of electrochemical oxidation products of biologically important purines
AUTHOR(S): Cleary, Michael T.; Dryhurst, Glenn
CORPORATE SOURCE: Dep. Chem., Univ. Oklahoma, Norman, OK, USA
SOURCE: Analytica Chimica Acta (1977), 94(2), 343-50
CODEN: ACACAM; ISSN: 0003-2670
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A liquid chromatog. method that uses a dual column system (Sephadex G 10 gel permeation and Sephadex QAE A 25 anion exchange) was developed for the quant. separation of mixts. of compds. found as products of electrochem. oxidation of biol. important purines. Small quantities (mg range) of such product mixts. may be separated, and quant. anal. also is possible in some case.
IT 585-05-7
RL: ANST (Analytical study)
(separation and determination of, dual-column chromatog. for, purine oxidation in relation to)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 67 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1976:405473 CAPLUS
DOCUMENT NUMBER: 85:5473
ORIGINAL REFERENCE NO.: 85:875a,878a
TITLE: Preparation of aminoacridine salts
AUTHOR(S): Petyunin, G. P.; Sysun, V. N.
CORPORATE SOURCE: Khar'k. Farm. Inst., Kharkov, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1975), 9(7), 24-8
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB 9-Aminoacridine (I) salts, e.g., I.RO2CCO2H (R = Et, Pr, Bu, octyl, PhCH2), II.RO2CCO2H (Me, CH2CH2Cl, Pr, Me2CH, Bu, pentyl, hexyl, heptyl, nonyl), I.RNHCOCO2H (R = Ph, p-MeC6H4, p-ClC6H4, o-, p-MeOC6H4, p-O2NC6H4, o-MeO2CC6H4, p-EtO2CC6H4, NH2CO, 2-, 3-, 4-pyridyl, 3-, 8-quinolyl), I.RNHNHCOCO2H (R = Ph, o-, m-, p-MeC6H4, o-, m-BrC6H4, m-, p-ClC6H4, o-MeOC6H4), and I.RCH:NNHCOCO2H [R = Ph, p-O2NC6H4, 3,4-(MeO)2C6H3] were obtained in 55-96% yields by mixing equimol. quantities of the acridine with the corresponding acid 24 hr at room temperature or by heating 30-40 min on a water bath.
IT 57727-31-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 57727-31-8 CAPLUS
CN Acetic acid, [(aminocarbonyl)amino]oxo-, compd. with 9-acridinamine (1:1) (9CI) (CA INDEX NAME)

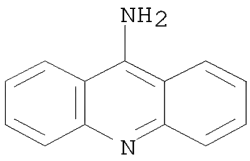
CM 1

CRN 585-05-7
CMF C3 H4 N2 O4



CM 2

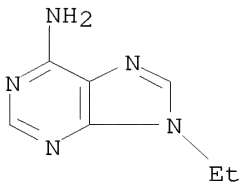
CRN 90-45-9
CMF C13 H10 N2



L6 ANSWER 68 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1975:571163 CAPLUS
DOCUMENT NUMBER: 83:171163
ORIGINAL REFERENCE NO.: 83:26795a,26798a
TITLE: X-ray crystal structure of the molecular complex 9-ethyladenine-parabanic acid-oxaluric acid monohydrate
AUTHOR(S): Shieh, Huey-Sheng; Voet, Donald
CORPORATE SOURCE: Dep. Chem., Univ. Pennsylvania, Philadelphia, PA, USA
SOURCE: Acta Crystallographica, Section B: Structural Crystallography and Crystal Chemistry (1975), B31(9), 2192-201
CODEN: ACBCAR; ISSN: 0567-7408
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Addnl. data considered in abstracting and indexing are available from a source cited in the original document. Crystals of the complex 9-ethyladenine-parabanic acid-oxaluric acid monohydrate, C13H17N9O8, have space group P.hivin.1, with a 6·802(1), b 13·131(2), c 11·135(2) Å, α 98·03(1), β 112·53(1), γ 98·04(1)°, and Z = 2. Intensity data were measured with an automated diffractometer using graphite monochromated Cu Kα radiation. The structure was solved by direct methods and refined by full matrix least-squares procedures to a final R = 0·040 based on 2808 unique reflections. The structure consists of roughly planar layers of mols. that are extensively H bonded to one another. The parabanic acid carbonyl groups exhibit little, if any, tendency to act as H-bond acceptors. Adjacent layers of mols. stack so that there are several interatomic contacts less than the minimal van der Waals distance. These close approaches appear to be due to Coulomb interactions involving ionic charges and strong dipoles. The role of the water mol. seems to be largely that of filling a cavity in the crystal structure.
IT 57228-63-4
RL: PRP (Properties)
(crystal structure of)
RN 57228-63-4 CAPLUS
CN Acetic acid, [(aminocarbonyl)amino]oxo-, compd. with 9-ethyl-9H-purin-6-amine and imidazolidinetrione (1:1:1), monohydrate (9CI) (CA INDEX NAME)

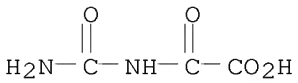
CM 1

CRN 2715-68-6
CMF C7 H9 N5



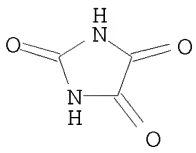
CM 2

CRN 585-05-7
CMF C3 H4 N2 O4



CM 3

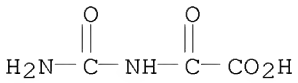
CRN 120-89-8
CMF C3 H2 N2 O3



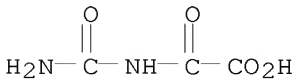
L6 ANSWER 69 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1974:401164 CAPLUS
DOCUMENT NUMBER: 81:1164
ORIGINAL REFERENCE NO.: 81:195a,198a
TITLE: Oxaluric acid. Nonmetabolizable inducer of the allantoin degradative enzymes in Saccharomyces cerevisiae
AUTHOR(S): Sumrada, Roberta; Cooper, Terrance G.
CORPORATE SOURCE: Fac. Arts Sci., Univ. Pittsburgh, Pittsburgh, PA, USA
SOURCE: Journal of Bacteriology (1974), 117(3), 1240-7
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: English

AB S. cerevisiae degrades allantoin in 5 steps to NH3, CO2, and glyoxylate. It is known that allophanic acid, the last intermediate of the pathway, is required for induction of all 5 degradation enzymes. The data indicate that oxaluric acid, an allophanate analog, can serve as a nonmetabolizable inducer. Oxaluric acid causes a high level of induction even in strains lacking urea carboxylase.

IT 585-05-7
RL: BIOL (Biological study)
(allantoin degradation enzymes induction by, in Saccharomyces cerevisiae)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

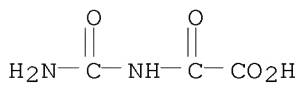


L6 ANSWER 70 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1974:133745 CAPLUS
DOCUMENT NUMBER: 80:133745
ORIGINAL REFERENCE NO.: 80:21577a,21580a
TITLE: Gamma irradiation of cytosine in an aerated aqueous solution. I. Identification of radiolysis products of cytosine resulting from the deamination pathway
AUTHOR(S): Polverelli, M.; Teoule, R.
CORPORATE SOURCE: Dep. Rech. Fondam., C.E.N., Grenoble, Fr.
SOURCE: Zeitschrift fuer Naturforschung, Teil C: Biochemie, Biophysik, Biologie, Virologie (1974), 29(1-2), 12-15
CODEN: ZNFCAP; ISSN: 0341-0471
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Radiolysis products resulting from the deamination pathway were isolated and identified after irradiation of cytosine with γ-rays in neutral aqueous solns. They were identical to those identified in uracil radiolysis, i.e. 5-6-dihydroxy-5,6-dihydrouracil (cis and trans forms), isodialuric acid, alloxan, 5-hydroxyhydantoin, parabanic acid, and oxaluricacid. The absence of 4,4'-diisobarbituric acid, alloxantin, or isobarbituric acid could be explained by the good stability of uracil glycols. The identification of biuret proved potential degradation mechanisms different from those involving the free radical attack on the 5,6-double bond.
IT 585-05-7P
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, from radiolytic degradation of cytosine)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

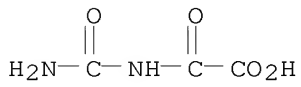


L6 ANSWER 71 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1973:131928 CAPLUS
DOCUMENT NUMBER: 78:131928
ORIGINAL REFERENCE NO.: 78:21143a,21146a
TITLE: GABA [γ-aminobutyric acid] uptake in rat brain slices. Inhibition by GABA analogs and by various drugs
AUTHOR(S): Beart, P. M.; Johnston, G. A. R.
CORPORATE SOURCE: Dep. Physiol., Aust. Natl. Univ., Canberra, Australia
SOURCE: Journal of Neurochemistry (1973), 20(2), 319-24
CODEN: JONRA9; ISSN: 0022-3042
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Of 77 compds. tested, 2-hydroxy-4-aminobutyric acid [3938-83-8] was the most potent inhibitor of γ-aminobutyric acid [56-12-2] uptake by rat brain slices in vitro. It and the other GABA analogs tested (2-chloro-4-aminobutyric acid [39919-02-3], 2-methyl-4-aminobutyric acid [39919-03-4], and 4-methyl-4-aminobutyric acid [627-61-2]) were competitive inhibitors of GABA uptake by the slices. A number of drugs such as amiloride [2609-46-3] and bicuculline methochloride [38641-83-7] nonspecifically inhibited GABA uptake.
IT 585-05-7

RL: BIOL (Biological study)
(GABA uptake by brain inhibition by)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

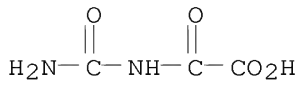


L6 ANSWER 72 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1973:39964 CAPLUS
DOCUMENT NUMBER: 78:39964
ORIGINAL REFERENCE NO.: 78:6297a,6300a
TITLE: Radiation effects induced by γ-radiation of pyrimidines in aqueous solutions
AUTHOR(S): Pleticha-Lansky, R.
CORPORATE SOURCE: Inst. Exp. Bot., Prague, Czech.
SOURCE: Tsitologiya i Genetika (1972), 6(5), 400-9
CODEN: TGANAK; ISSN: 0564-3783
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Investigations with polarog., oscillopolarog., chromatog., and 14C-labeled pyrimidines showed that, as a result of γ-irradiation of cytosine and uracil in aqueous solns. isobarbituric, 4,4'-diisobarbituric, and isodialuric acids and the system, dialuric acid + alloxan .dblarw. alloxantin were formed. As a result of their hydrolysis, parabanic and oxaluric acids are formed. Mechanisms of the chemical and radiation-chemical processes are discussed.
IT 585-05-7
RL: FORM (Formation, nonpreparative)
(formation of, from radiolysis of pyrimidines)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

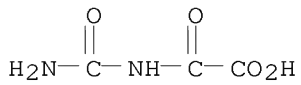


L6 ANSWER 73 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1971:434132 CAPLUS
DOCUMENT NUMBER: 75:34132
ORIGINAL REFERENCE NO.: 75:5393a,5396a
TITLE: Radical reaction of food constituents. Photolysis of uracil in the presence of hydrogen peroxide
AUTHOR(S): Ochiai, Hideo
CORPORATE SOURCE: Coll. Agric., Shimane Univ., Shimane, Japan
SOURCE: Agricultural and Biological Chemistry (1971), 35(4), 622-4
CODEN: ABCHA6; ISSN: 0002-1369
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Upon irradiation with uv-light in the presence of H2O2, uracil was decomposed to parabanic acid and oxaluric acid. Oxaluric acid was further decomposed to urea and oxalic acid.
IT 585-05-7
RL: FORM (Formation, nonpreparative)
(formation of, in uracil decomposition by uv light)
RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 74 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1968:74901 CAPLUS
DOCUMENT NUMBER: 68:74901
ORIGINAL REFERENCE NO.: 68:14411a,14414a
TITLE: Polarographic reduction of oxaluric acid. Analytical application
AUTHOR(S): Dryhurst, Glenn; Elving, Philip J.
CORPORATE SOURCE: Univ. of Michigan, Ann Arbor, MI, USA
SOURCE: Analytical Chemistry (1968), 40(3), 492-5
CODEN: ANCHAM; ISSN: 0003-2700
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The polarographic reduction of oxaluric acid (I) in a 2-electron process, apparently to glyoxylic acid monoureide, is studied. At pH 1-5, undissocd. I is reduced, giving a single, well-formed polarographic wave. At pH 1-6, the half-wave potential, E1/2, varies linearly with pH according to the equation E1/2 = -0.895 -0.108 pH. At pH >6.1, a single, essentially pH-independent wave is obtained at E1/2 = -1.650 ± 0.080, corresponding to the reduction of the oxalurate anion. At pH 5-6, both processes occur, the heights of the resp. waves depending on the extent of I dissociation and the rate of recombination of the anion and H+. The anal. application of the polarographic reduction of I is discussed. In pH 0.75 Cl- and pH 4.7 OAc- media, a nearly linear dependence of concentration on wave height is obtained for 0.2-1.0mM I. The deviation of the limiting current values at each concentration is ≤±3% of the mean.
IT 585-05-7
RL: ANT (Analyte); ANST (Analytical study)
(determination of, polarographic)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



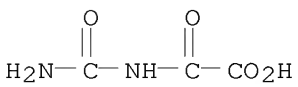
L6 ANSWER 75 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1967:344 CAPLUS
DOCUMENT NUMBER: 66:344
ORIGINAL REFERENCE NO.: 66:67a,70a
TITLE: Polarographic study of the effects of γ-radiation on cytosine
AUTHOR(S): Pleticha-Lansky, Roman; Weiss, Joseph J.
CORPORATE SOURCE: Univ. Newcastle-upon-Tyne, UK
SOURCE: Analytical Biochemistry (1966), 16(3), 510-22
CODEN: ANBCA2; ISSN: 0003-2697
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Polarographic studies of the effects of γ-radiation on cytosine supplementing the Ekert-Monier scheme (Nature 188, 309 (1960)) showed that isobarbituric acid underwent further radiation-induced reactions. The temporary yellow-green color and the green fluorescence were ascribed to

the formation of 4,4'-diisobarbituric acid. Further radiolytic products of isobarbituric acid were isodialuric and dialuric acids. The easy oxidation of dialuric acid led to the formation of alloxan and subsequently to the system dialuric acid + alloxan .dblharw. alloxantin. With increasing radiation dose, parabanic acid was also formed, probably as an oxidative product of alloxanic acid formed by a benzilic acid type of rearrangement of alloxan. However, parabanic acid underwent hydrolysis, yielding oxaluric acid. Above a radiation dose of 5 + 1020 ev. ml-1, the overall effects were ring opening and hydrolytic formation of simple aliphatic compds., with the solution turning colorless. 28 references.

IT 585-05-7
RL: BIOL (Biological study)
(from isobarbituric acid after γ-irradiation)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 76 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

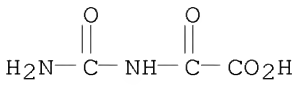
ACCESSION NUMBER: 1966:474750 CAPLUS
DOCUMENT NUMBER: 65:74750
ORIGINAL REFERENCE NO.: 65:13997d-g
TITLE: Low spin ferric hemoglobin complexes
AUTHOR(S): Harris, Gilda
CORPORATE SOURCE: Stanford Univ., Stanford, CA
SOURCE: Theoretica Chimica Acta (1966), 5(5), 379-97
CODEN: TCHAAM; ISSN: 0040-5744
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A calcn. has been made of the energy eigenfunctions and eigenvalues of low-spin ferric ion in complexes with a strong cubic crystal field including the effects of tetragonal and rhombic distortions and of spin-orbit coupling among the ground state components and with excited states. Using the resultant, spin-orbit coupled eigenfunctions as a basis set, the magnetic susceptibility, the components of magnetic field energy, and the lattice and valence contributions to an elec. field gradient at the iron nucleus were all calculated as a function of rhombic, tetragonal, and spin-orbit coupling strength used as parameters: R, u, and δ. All of the calculated results agree reasonably well with exptl. for the values of parameters R = 1000 cm.-1 u = 2000 cm.-1, and the free ion value δ= 420 cm.-1 These values of parameters were selected for the excellent fit they gave of the calculated values of gx, gy, and gz compared with the exptl. ones obtained from single crystal ESR of ferriHb azide. With them, a value of 2.29 μB was calculated for the effective magnetic moment compared to the exptl. value of 2.35. The total field gradient calculated under the same conditions predicts a nuclear quadrupole moment Q in the range of 0.107-0.127 barns, which is smaller than the range predicted from the high spin ferric ion results. Reasons for the discrepancy are discussed. 16 refs.

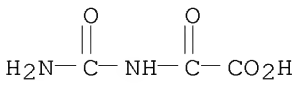
IT 13188-21-1
(Derived from data in the 7th Collective Formula Index (1962-1966))

RN 13188-21-1 CAPLUS

CN Oxaluric acid, monoammonium salt (8CI) (CA INDEX NAME)

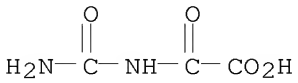


L6 ANSWER 77 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1965:18495 CAPLUS
DOCUMENT NUMBER: 62:18495
ORIGINAL REFERENCE NO.: 62:3338g-h,3339a
TITLE: Effects of metabolites and antimetabolites on the sporulation of Peronospora tabacina on tobacco leaf disks
AUTHOR(S): Shepherd, C. J.; Mandryk, M.
CORPORATE SOURCE: Div. Plant Ind., C.S.I.R.O., Canberra
SOURCE: Australian Journal of Biological Sciences (1964), 17(4), 878-91
CODEN: AJBSAM; ISSN: 0004-9417
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The effects of 148 metabolites and antimetabolites on the sporulation of P. tabacina on leaf disks of Nicotiana tabacum var Virginia Gold were determined Sporulation intensities of 68 + 104 - 153 + 104 conidia/sq. cm. leaf area are observed. Normal metabolites, with the exception of FAD, have slight although statistically significant effects on sporulation intensity. This observation suggests that inhibition-nutrition phenomena play no part in the sporulation process. Seven uracil analogs have an inhibitory effect on sporulation, and reversal of inhibition by uracil suggests the active involvement of this compound in sporulation. Canavanine at a final concentration of 120 γ/ml. completely inhibits sporulation. Reversal of canavanine inhibition by arginine, citrulline, and ornithine suggests the involvement of arginine and the functioning of an ornithine cycle in the sporulation system. White, instead of the normal blue, conidia are produced in the presence of a number of S-containing compds. It is suggested that this phenomenon depends on the chelating properties of these compds. toward Cu++, with the subsequent inactivation of tyrosinase activity in the conidia.
IT 585-05-7, Oxaluric acid
(Peronospora tabacina sporulation inhibition by)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

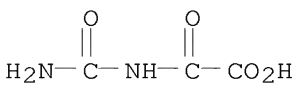


L6 ANSWER 78 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1964:69852 CAPLUS
DOCUMENT NUMBER: 60:69852
ORIGINAL REFERENCE NO.: 60:12346d-e
TITLE: Purine metabolism of unicellular algae. I. Chromatographic detection of some purines, pyrimidines, and imidazoles by their mercuric complexes
AUTHOR(S): Ammann, Elizabeth C. B.; Lynch, Victoria H.
CORPORATE SOURCE: Lockheed Missiles & Space Co., Palo Alto, CA
SOURCE: Analytical Biochemistry (1964), 7(4), 387-92
CODEN: ANBCA2; ISSN: 0003-2697

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A mercuric acetatediphenylcarbazone spray test for the identification of mixts. of xanthines and uric acids was found to apply to other purines, to some pyrimidines and imidazoles, and to other cyclic N compds. containing an NH group cross-conjugated with 2 unsatd. groups. These compds. may be conveniently divided into 2 categories; (1) compds. which react with the spray test and which can also be detected by ultraviolet examination (hypoxanthine, xanthine, uric acid, guanine, adenine, orotic acid, violuric acid, and creatinine); (2) compds. which are not detected with the ultraviolet lamp in small quantities (10 γ) but which are stained with the spray (allantoin, hydantoin, parabanic acid, cyanuric acid, and alloxan). The chemistry of the reaction is discussed. This spray technique should be applicable for investigating the metabolism of purines in plants and animals.
IT 585-05-7, Oxaluric acid
(detection of)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

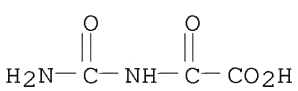


L6 ANSWER 79 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1964:24542 CAPLUS
DOCUMENT NUMBER: 60:24542
ORIGINAL REFERENCE NO.: 60:4394h,4395a
TITLE: Oxamic transcarbamylase of Streptococcus allantoicus
AUTHOR(S): Bojanowski, R.; Gaudy, Elizabeth; Valentine, R. C.; Wolfe, R. S.
CORPORATE SOURCE: Univ. of Illinois, Urbana
SOURCE: Journal of Bacteriology (1964), 87(1), 75-80
CODEN: JOBAAY; ISSN: 0021-9193
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB An improved colorimetric assay for carbamyl oxamate, which allows the precise measurement of the activity of oxamic transcarbamylase, has been developed. Activity is maximum over the pH range 8.3-8.7. A cation requirement is satisfied by 2.5 + 10-3M Mg++ or Mn++. The equilibrium constant for the phosphorolysis of carbamyl oxamic acid is 1.6, corresponding to a neg. free energy change of -285 cal./mole.
IT 585-05-7, Oxaluric acid
(determination of)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

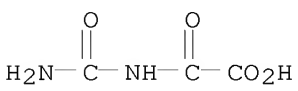


L6 ANSWER 80 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1963:42843 CAPLUS
DOCUMENT NUMBER: 58:42843
ORIGINAL REFERENCE NO.: 58:7335d
TITLE: Biosynthesis of carbamoyl oxamic acid
AUTHOR(S): Valentine, R. C.; Wolfe, R. S.
CORPORATE SOURCE: Univ. of Illinois, Urbana
SOURCE: Biochemical and Biophysical Research Communications (1960), 2, 384-7

From: Biol. Abstr. 36, Abstr. No. 11126(1961).
CODEN: BBRCA9; ISSN: 0006-291X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The major products of the fermentation of allantoin by Streptococcus allantoicus are ammonia, urea, oxamic acid, and CO2. Since the organism cannot convert urea to ammonia, it was concluded earlier that at least one of the ureido groups of allantoic acid is decomposed before being separated from the 2-carbon chain. An energy-yielding step could be the decomposition of this ureido group. The reaction may serve then as a primary energy source in S. allantoicus.
IT 585-05-7P, Oxaluric acid
RL: PREP (Preparation)
(formation from allantoin by Streptococcus allantoicus)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

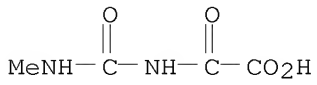


L6 ANSWER 81 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1962:471290 CAPLUS
DOCUMENT NUMBER: 57:71290
ORIGINAL REFERENCE NO.: 57:14218e-f
TITLE: Germination of conidia of Peronospora tabacina. I. Germination in vitro
AUTHOR(S): Shepherd, C. J.
CORPORATE SOURCE: Div. Plant Ind., C.S.I.R.O., Canberra
SOURCE: Australian Journal of Biological Sciences (1962), 15, 483-508
CODEN: AJBSAM; ISSN: 0004-9417
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Washed conidia germinated poorly or not at all in H2O, but germinated in presence of riboflavine. Rate of germination in liquid suspension was enhanced by C and N sources, phosphate, Ca++, and Mg++. The effects of 141 metabolites on germination and germ-tube elongation were tested. Some analogs of purines and pyrimidines were inhibitory. Washing by centrifugation increased % germination, and presence of germination inhibitor in unwashed conidia is postulated. The optimum temperature for germination was in range 15-20°. The pH optimum was in range 5.5-8.0 on 2% agar and 6.5-8.0 in liquid suspension.
IT 585-05-7, Oxaluric acid
(effect on Peronospora tabacina germination)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

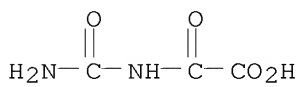


L6 ANSWER 82 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1962:449317 CAPLUS
DOCUMENT NUMBER: 57:49317
ORIGINAL REFERENCE NO.: 57:9846a-c
TITLE: Chemical structure of albomycin antibiotic. I. Isolation and identification of the pyrimidine base

AUTHOR(S): Poddubnaya, N. A.; Lavrenova, G. I.; Krysin, E. P.; Makevnina, L. G.
SOURCE: Zhurnal Obshchei Khimii (1961), 31, 3820-6
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Paper electrophoresis of albomycin in 30% AcOH gave 3 fractions moving to the cathode; only the middle fraction was biol. active. A perpendicular paper chromatography in BuOH-H2O-AcOH separated the middle fraction into 3 subfractions of which only 1 was active. The content of the active material varies among samples so that numerical values are insignificant. Hydrolysis of albomycin in 20% HCl 24 hrs. gave a pyrimidine base identified as 1-methyluracil, m. 170-2°. This also formed from the active fraction isolated chromatographically above. Refluxing 2-ethylthio-6-hydroxypyrimidine with MeI in 95% EtOH in the presence of KOH gave 25% 1-methyl-2-ethylthio-6-hydroxypyrimidine, m. 78-9°, which heated with 20% HCl 1 day gave 1-methyluracil, m. 172-4° (Johnson and Heyl, CA 1, 2373). 6-Thiouracil and MeI in EtONa-EtOH gave 90% 2-hydroxy-3-methyl-6-methylthiopyrimidine, m. 115-20°, which with concentrated HCl gave 33% 3-methyluracil, m. 232°. These were oxidized with KMnO4 to ω-methyloxaluric acid, m. 187°, along with some acetylurea and oxalic acid.
IT 89281-42-5P, Oxamic acid, (methylcarbamoyl)-
RL: PREP (Preparation)
(preparation of)
RN 89281-42-5 CAPLUS
CN Acetic acid, 2-[[(methylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



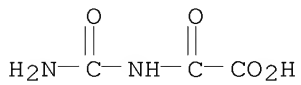
L6 ANSWER 83 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1962:34732 CAPLUS
DOCUMENT NUMBER: 56:34732
ORIGINAL REFERENCE NO.: 56:6592a-b
TITLE: Phenobarbital-C14 in the rat. II
AUTHOR(S): Glasson, B.; Benakis, A.
CORPORATE SOURCE: Univ. Geneva, Switz.
SOURCE: Helvetica Physiologica et Pharmacologica Acta (1961), 19, 323-34
CODEN: HPPAAL; ISSN: 0367-6242
DOCUMENT TYPE: Journal
LANGUAGE: French
AB cf. CA 53, 19146b. No exhaled C14O2 was detected during the 24 hrs. following injection of phenobarbital-C14 in the rat. Seven different catabolites were radiochromatographically detected in the urine (details given). About 27% of the dose was excreted unchanged. Metabolites included p-hydroxyphenobarbital and its glucuronide, 2 or 3 unidentified compds., and the hitherto unreported 5-ethylbarbituric acid, parabanic acid, and oxaluric acid. There was no evidence of fission of the barbituric ring.
IT 585-05-7, Oxaluric acid
(as phenobarbital metabolite in urine)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 84 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:138045 CAPLUS
DOCUMENT NUMBER: 55:138045
ORIGINAL REFERENCE NO.: 55:26107b-c
TITLE: Intermediates in anaerobic allantoid degradation by bacteria
AUTHOR(S): Vogels, G. D.
CORPORATE SOURCE: Technol. Univ., Delft, Neth.
SOURCE: Biochemische Zeitschrift (1961), 334, 457-61
CODEN: BIZEA2; ISSN: 0366-0753
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Evidence has been obtained for the occurrence of oxaluric and allantoic acids as intermediates in the anaerobic breakdown of allantoin by 2 bacteria freshly isolated from ditch mud. The results indicate also that glyoxylic acid is an intermediate in the fermentation of allantoin. Glycine was found to be one of the end-products of this fermentation. A reaction scheme was proposed distinguishing between, on one hand, a hydrolytic and reductive pathway resulting in the formation of urea, glyoxylic acid, glycine and cell material via allantoic acid as an intermediate, and on the other hand, an oxidative pathway in which oxaluric and oxamic acids are formed via a dehydrogenation of allantoin.

IT 585-05-7P, Oxaluric acid
RL: PREP (Preparation)
(formation in allantoin metabolism by bacteria)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 85 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:87782 CAPLUS
DOCUMENT NUMBER: 55:87782
ORIGINAL REFERENCE NO.: 55:16627h-i,16628a-b
TITLE: Phosphorolysis of carbamoyloxamic acid
AUTHOR(S): Valentine, R. C.; Wolfe, R. S.
CORPORATE SOURCE: Univ. of Illinois, Urbana
SOURCE: Biochimica et Biophysica Acta (1960), 45, 389-91
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English

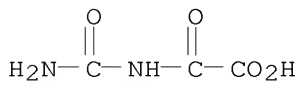
AB cf. Biochim. Biophys. Research Communs. 2, 384(1960). The mechanism proposed for the decomposition of the ureido group of carbamoyloxamate (I) by Streptococcus allantoicus is: (1) HO2CCONHCONH2 + inorg. phosphate → H2NCO .apprx. P + HO2CCONH2, and (2) H2NCO .apprx.P + adenosine diphosphate → NH3 + CO2 + adenosine triphosphate (ATP). Evidence supporting this mechanism is presented. ATP generation from I was coupled with acetate phosphorylation by means of an acetate kinase present in the enzyme preparation (loc. cit.). Acetyl phosphate was trapped as it was formed by H2NOH. Under these conditions the equilibrium of reaction (1), which is towards the synthesis of I, was displaced since the ATP formed by reaction (2) was utilized in acetate activation. High concns. of neutral H2NOH and acetate did not inhibit the reaction. Acethydroxamic acid formation from I required inorg. phosphate, Mg++, acetate, adenosine diphosphate, H2NOH, enzyme, and substrate. Inorg. phosphate played a catalytic role. Oxamate formation correlated well with I disappearance. Further evidence for the intermediary role of carbamoyl phosphate was the finding that I was an

active carbamoyl donor for the inorg. phosphate-dependent synthesis of citrulline from ornithine.

IT 585-05-7, Oxaluric acid
(phosphorolysis by Streptococcus allantoicus)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 86 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1960:51597 CAPLUS

DOCUMENT NUMBER: 54:51597

ORIGINAL REFERENCE NO.: 54:10159b-d

TITLE: The metabolism of derivatives of barbituric acid. III. The metabolism of Phanodorn in the rat

AUTHOR(S): Goldschmidt, St.; Koss, Fr. W.

CORPORATE SOURCE: Tech. Hochschule, Munich, Germany

SOURCE: Z. physiol. Chem. (1959), 316, 224-32

DOCUMENT TYPE: Journal

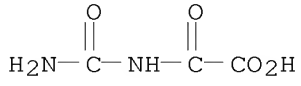
LANGUAGE: Unavailable

AB cf. C.A. 50, 7815a. Phanodorn-2-C14, (200 mg./kg. in 0.05N NaOH) was given to rats by means of an esophageal tube. Its excretion in feces as well as urine was measured and C14O2 determined in expired air. The metabolites of the drug were separated by paper chromatography and their structures elucidated. Almost all of the radioactivity of the drug was excreted within 70 hrs., mostly in the urine. Phanodorn as such and 4 of its metabolites were isolated. They were: oxaluric acid, 5-ethylbarbituric acid (I), 5-ethyl-5-(3-oxo-1-cyclohexenyl)barbituric acid (II), and 5-ethyl-5-(3-hydroxy-1-cyclohexenyl)barbituric acid (III).

IT 585-05-7, Oxaluric acid
(as Phanodorm metabolite)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 87 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1956:15975 CAPLUS

DOCUMENT NUMBER: 50:15975

ORIGINAL REFERENCE NO.: 50:3225b-c

TITLE: The properties of interrelation of oxaluric and parabanic acids

AUTHOR(S): Andrews, James C.; Sell, Irl T.

CORPORATE SOURCE: Univ. of North Carolina, Chapel Hill

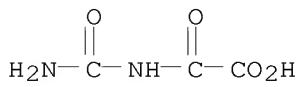
SOURCE: Archives of Biochemistry and Biophysics (1955), 56, 405-11
CODEN: ABBIA4; ISSN: 0003-9861

DOCUMENT TYPE: Journal

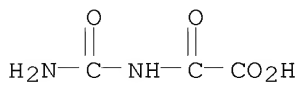
LANGUAGE: Unavailable

AB Conditions for the hydrolysis of parabanic (I) to oxaluric acid (II) and to urea and (CO2H)2 were studied by means of both titration and ultraviolet absorption spectra data. These show that at room temperature free I
slowly changes to II whereas the salts of I change to II in a few min. The splitting of II to (CO2H)2 and urea is a slower process. I behaves as a monobasic acid with a pK value of 6.10. (CO2H)2 also shows only 1

inflection of its titration curve at an approx. pH of 2.0.
IT 585-05-7, Oxaluric acid
(and salts)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

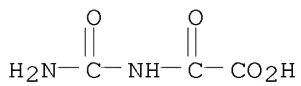


L6 ANSWER 88 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1955:43214 CAPLUS
DOCUMENT NUMBER: 49:43214
ORIGINAL REFERENCE NO.: 49:8351f-h
TITLE: A comparative study of the end-products of uric acid oxidation by peroxidases
AUTHOR(S): Canellakis, E. S.; Tuttle, Alice L.; Cohen, Philip P.
CORPORATE SOURCE: Univ. of Wisconsin, Madison
SOURCE: Journal of Biological Chemistry (1955), 213, 397-404
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. preceding abstrs. The oxidative decomposition of uric acid-2-C14 and uric
acid-8-C14 by a catalase-EtO2H system and by systems of lactoperoxidase-H2O2, verdoperoxidase-H2O2, and horseradish-H2O2 was studied at neutrality. The catalase-EtO2H system oxidizes uric acid beyond the allantoin stage. Among the labeled end-products of uric acid-2-C14 oxidation are urea, allantoin, carbonyl diurea, oxalyl diurea, cyanuric acid, oxonic acid, and CO2. Uric acid-8-C14 yields in addition labeled parabanic acid and oxaluric acid. The lactoperoxidase-H2O2-borate system yields urea, allantoin, 4,5-dihydroxy-5-ureido-2-imidazolidinone-4-carboxylic acid, and alloxanic acid in contrast to the verdoperoxidase-H2O2-phosphate and horseradish peroxidase-H2O2-phosphate systems, which yield only urea and allantoin. The relation of these systems, their possible biol. significance, and some aspects of the mechanism of uric acid oxidation are discussed.
IT 585-05-7, Oxaluric acid
(from uric acid oxidation)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

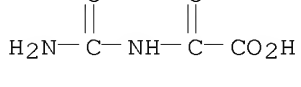


L6 ANSWER 89 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1954:27758 CAPLUS
DOCUMENT NUMBER: 48:27758
ORIGINAL REFERENCE NO.: 48:4974g-h
TITLE: The infrared spectra of the amides of oxalic acid in the region between 3 and 6 μ
AUTHOR(S): Chouteau, Jacques
CORPORATE SOURCE: Fac. sci., Marseille
SOURCE: Bulletin de la Societe Chimique de France (1953) 1148-51
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The infrared spectra are presented for unsubstituted oxamides, N-substituted oxamic acids, N,N'-substituted oxamides, and the imides of diacids. A comparison of these spectra permits the interpretation of structural analogs.
IT 585-05-7, Oxaluric acid
(spectrum of)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

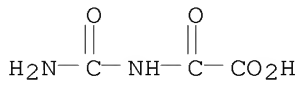


L6 ANSWER 90 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1952:65842 CAPLUS
DOCUMENT NUMBER: 46:65842
ORIGINAL REFERENCE NO.: 46:10958h-i,10959a
TITLE: Polarographic behavior of parabanic, oxonic, and oxaluric acids
AUTHOR(S): Hladik, Vl.
CORPORATE SOURCE: Charles Univ., Prague
SOURCE: Sbornik Mezinarod. Polarog. Sjezdu Praze, 1st. Congr. (1951), (Pt. I.), Proc. 680-6;686-94
DOCUMENT TYPE: Journal
LANGUAGE: Russian/German
AB Parabanic acid is polarographically reducible; 3 different waves are obtained for the undissocd. acid and the uni- and bivalent anions, resp. Its dissociation consts. are 6 + 10-7 and 1.59 + 10-11 at 20°. Oxaluric acid is reduced polarographically in 2 steps at such neg. potentials that the wave height and half-wave potentials can only be estimated; its dissociation constant is 1 + 10-5 at 18°. Oxonic acid (allantoxanic acid) is more easily reduced than parabanic acid; it also shows the 3 different waves. Its dissociation consts. are 1.6 + 10-5 and 8 + 10-7 at 18°. The polarographic data which served to calculate the dissociation consts. were also used to determine the reaction-velocity consts. of the hydrolysis of parabanic and oxaluric acids.
IT 585-05-7, Oxaluric acid
(polarography of)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

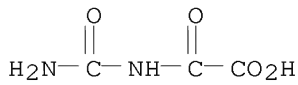


L6 ANSWER 91 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1938:18268 CAPLUS
DOCUMENT NUMBER: 32:18268
ORIGINAL REFERENCE NO.: 32:2591h-i,2592a
TITLE: Biology of oxalic acid. II. Oxalogenic compounds of urine
AUTHOR(S): Flaschentrager, Bonifaz; Muller, Paul B.
SOURCE: Z. physiol. Chem. (1938), 251, 61-9
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Continued extraction of acidified urine with Et2O after 2 hrs. yields regularly 0.25-0.55 mg.% (CO2H)2 per hr. Tests show that oxaluric, parabanic, uric and ascorbic acids, allantoin, alloxan, creatinine and glucose yield more

or less, and glycollic acid and glycine yield no oxalic acid in the determination
The quantities of oxaluric and parabanic acids and alloxan in urine are not sufficient to account for the extra oxalic acid formed. Oxalic acid is decomposed by H2O2 at 90° and tissue pH, it is not affected by HgO + NaOH. If urine is treated with NaOH and HgCl2 extra oxalic acid is formed. Under these conditions considerable quantities of oxalic acid are formed from glycollic and uric acids, glycine and creatinine.
IT 585-05-7, Oxaluric acid
(in urine)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

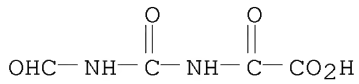


L6 ANSWER 92 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1935:36637 CAPLUS
DOCUMENT NUMBER: 29:36637
ORIGINAL REFERENCE NO.: 29:4741e-g
TITLE: Action of hydrazine on cyclic ureides (parabanic acid)
AUTHOR(S): Fosse, Richard; Thomas, Paul-Emile; de Graeve, Paul
SOURCE: Compt. rend. (1935), 200, 1260-4
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB Parabanic acid (I), treated with (NH2)2, gave NH2CONH(CO)2NHNH2 (II), m. 198° (decomposition); with PhNHNH2 it gave NH2CO-NH(CO)2NHNHPh. I, treated with xanthydrol (III), gave CO.NR.CO.NR.CO (R = xanthyl), m. 214°. II, treated with III, gave RNHCONH(CO)2NHNH2; with BzH,PhCH:NNH(CO)2NHCONH2,m.215°(decomposition); with CH2O, CH2:NNH(CO)2NHCONH2, m. 212° (decomposition); with AcH, MeCH:NNH(CO)2NHCONH2, m. 224° (decomposition).
IT 585-05-7, Oxaluric acid
(hydrazides)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)

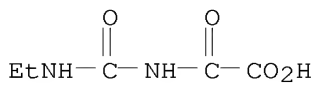


L6 ANSWER 93 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1932:9234 CAPLUS
DOCUMENT NUMBER: 26:9234
ORIGINAL REFERENCE NO.: 26:1034c-d
TITLE: Studies on the physiology of pyrimidines. V. The effects of certain pyrimidines on the sulfur metabolism of the dog
AUTHOR(S): Stekol, Jakob A.; Cerecedo, Leopold R.
SOURCE: Journal of Biological Chemistry (1931), 93, 275-82
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Isobarbituric, isodialuric and formyloxaluric acids, when fed to dogs, were partly metabolized to urea, and in the case of isobarbituric acid partly excreted as "ethereal" sulfate. In each case the excretion of neutral S was partly or wholly inhibited on the day after feeding the

compound
IT 106055-61-2, Oxamic acid, N-formylcarbamyl-
(metabolism of)
RN 106055-61-2 CAPLUS
CN Acetic acid, 2-[[(formylamino)carbonyl]amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 94 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1925:22575 CAPLUS
DOCUMENT NUMBER: 19:22575
ORIGINAL REFERENCE NO.: 19:2933c
TITLE: Oxidation of uric acid glycols
AUTHOR(S): Slotta, K. H.
SOURCE: Journal fuer Praktische Chemie (Leipzig) (1925
), 110, 264-72
CODEN: JPCEAO; ISSN: 0021-8383
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The glycols (10 g.) were oxidized with 80 cc. perhydrol (Merck) at room temperature Uric acid glycol after 4 days gave 42% of NH4 oxalurate. 9-Methyluric acid glycol gave 74% of NH4 methyloxalurate. 9-Ethyluric acid glycol gave only 0.32 g. NH4 ethyloxalurale, m. 232° (decomposition). 7,9-Dimethyluric acid glycol gave 50% of (CONHMe)2, m. 217°, while the 7,9-di-Et derivative gave 2.1 g. (CONHEt)2, m. 180°.
IT 105918-81-8P, Oxaluric acid, ethyl-, ammonium salt
RL: PREP (Preparation)
(preparation of)
RN 105918-81-8 CAPLUS
CN Acetic acid, 2-[[(ethylamino)carbonyl]amino]-2-oxo-, ammonium salt (1:1)
(CA INDEX NAME)



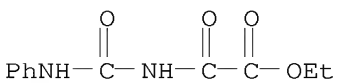
L6 ANSWER 95 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1924:13537 CAPLUS
DOCUMENT NUMBER: 18:13537
ORIGINAL REFERENCE NO.: 18:1816e-i,1817a
TITLE: Action of alkali on substituted uric acids I.
1,3-Dimethyl-9-phenyluric acid
AUTHOR(S): Gatewood, Elizabeth Stuart
SOURCE: Journal of the American Chemical Society (1923
), 45, 3056-64
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 18:13537
GI For diagram(s), see printed CA Issue.
AB 1,3-Dimethyl-9-phenyluric acid (I) is decomposed only very slowly by 4 N alkali at room temperature; at 100° with more dilute alkali, the decomposition

is more rapid and with 4 N alkali it is instantaneous; the products are MeNH2, CO2 and 3- phenylisohydantoin-5-carboxylic methylamide, NH.CO.NPh.C(OH):CCONHMe (II). When warmed with alkali, or even on standing about an hr. with cold alkali, II decomps. completely into PhNHCONH2, MeNH2, (CO2H)2 and HCO2H; the PhNHCONH2 seps. after only 15 min. but no (CO2H)2 can yet be detected at this point unless the solution is first warmed, indicating that its formation is due to a secondary reaction; probably OHCCO2H is first formed and changes into (CO2H)2 and HOCH2CO2H when heated or allowed to stand with the alkali. With H2O2 in dilute alkaline solution II yields 3-phenyl-5-hydroxyhydantoin-5-carboxylic methylamide, NH.CO.NPh.CO.C(OH)CONHMe (III), which is instantly decomposed by cold alkali into PhNHCONH2 and HO2CCOCONHMe (IV) and on boiling is further decomposed into MeNH2, PhNHCONH2 and CO(CO2H)2 (V). II (1.2-1.4 g. from 2 g. I in 100 cc. of 4 N NaOH slowly heated to boiling, boiled 0.5 min., cooled slightly, acidified with HCl and allowed to stand), rectangular plates, α 1.571, γ 1.629, m. 249-50°, gives with boiling Ac2O a substance m. 185-7°, does not react with PhNCO at 165° or in alkaline solution at 0°. III (0.6 g. from 1 g. II in 12 cc. H2O with 2.9 g. KOH and 70 cc. of 3% H2O2 kept 5 min. below 10° and then acidified with HCl), rectangular plates, α 1.545, γ 1.583, m. 194-5°; the mother liquors yield a substance separating in needles, α 1.556, γ 1.695, m. 188-90°. The phenylhydrazone of V seps. in needles, α 1.459, γ 1.800, m. 165°; that of IV in hexagonal plates, α 1.600, γ 1.715, m. 167° (Torrey, Ber. 31, 2162 (1898), gives 158°). Et phenyloxalurate (4.7 g. from 5 g. NH2COCO2Et and 10 g. PhNCO heated 1 hr. at 110-2°), m. 125-6° (gas evolution), seps. in 2 crystalline forms, α 1.590, γ 1.680, and α 1.675, γ 1.755, resp.; 1 g. allowed to stand in H2O 0.5 hr. with 1 g. of 33% MeNH2 gives 0.74 g. of the methylamide, m. 210-5°, α 1.595, γ 1.700, instantly decompd, by cold 4 N NaOH into PhNHCONH2, (CO2H)2 and MeNH2. 1,7-Di-methyl-9-phenylpseudouric acid (8 g. from 5 g. 1.7-dimethyluramil in 60 cc. of N KOH treated at 0-2° in the course of 0.5 hr. with 3.8 g. PhNCO), turns pink 160°, light yellow 210°, m. 220°, dissolves in about 350 parts H2O, seps. in hexagonal plates, α 1.555, γ 1.695; 5 g. boiled in 1 l. of 20% HCl until crystallization begins and concentrated yields 3.8 g. 1,7-dimethyl-9-phenyluric acid, rectangular and hexagonal plates, α 1.540, γ 1.755, does not m. 280°, is unchanged by boiling 10 min. with 4 N alkali, is also obtained in 0.5 g. yield, together with 0.1 g. of the 1,3,7-Me3 acid, from 1 g. of 7-methyl-9-phenyluric acid with 2 g. Me2SO4 in 2 N NaOH.

IT 221391-80-6P, Oxaluric acid, phenyl-, ethyl ester
RL: PREP (Preparation)
(preparation of)

RN 221391-80-6 CAPLUS

CN Acetic acid, oxo[[(phenylamino)carbonyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



L6 ANSWER 96 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1924:3772 CAPLUS
DOCUMENT NUMBER: 18:3772
ORIGINAL REFERENCE NO.: 18:531a-i,532a-c
TITLE: Oxidation of uric acid
AUTHOR(S): Biltz, Heinrich; Schauder, Hans
SOURCE: Journal de Physiologie (Paris, 1946-1992) (1923), 106, 108-72
CODEN: JOPHAN; ISSN: 0021-7948

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

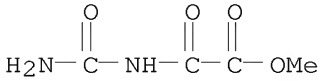
AB The number of oxidation products of uric acid (I) is very large; this is due in part to the characteristic unsym. formula of uric acid and also to the different action of various oxidizing agents. The oxidation products, however, depend more upon the nature of the solution than upon the sp. nature of the oxidizing agent, i. e., the same reagent will give different products, depending on whether the reaction is carried out in acid, alkaline or neutral medium. The mechanism of the alkaline oxidation is fairly well known; the formation of alloxan (II) and parabanic acid (III) by acid oxidation is not so well understood. Oxidation of 10 g. I in 300 cc. H_2O containing 9 g. KOH with 16.3 g. $KMnO_4$ (2.6 atoms O) in 4% solution acidified with 20 cc. AcOH, gave 22% K oxalurate (see below) (IV), 14% $CO(NH_2)_2$ isolated as the HNO_3 salt (V), and 1.6-1.8 g. oxalyldiureide (VI). The reaction proceeds in the same way with 2 atoms O, the extra 0.6 atom used above accounting for the side reactions. If the oxidation is carried out with solid I suspended in 20% AcOH (by volume), there result 16% IV, 22% V and 0.5 g. impure VI. Even with 1 atom O, $(CO_2H)_2$ is the principal oxidation product. Oxidation of 5 g. I by 8 g. $K_2S_2O_8$ and 6 g. AcOK in 50 cc. H_2O at 100° gave about 1 g. II. If 2 atoms O are used, there are formed IV and VI. In the presence of CO_2, I is oxidized in the same manner as in AcOH. A neutral oxidation with $KMnO_4$ or $K_2S_2O_8$ cannot be carried out because the 1 develops alkali, the other acid immediately after the reaction starts. Therefore H_2O_2 was used. Boiling 2 g. I, 1 cc. perhydrol and 30 cc. H_2O and adding H_2O_2 until 5 cc. have been used, there result 0.4 g. $CO(NHCONH_2)_2$ and 0.05 g. cyanuric acid; the same products result in AcOH. In the presence of H_2SO_4, $KMnO_4$ and $K_2S_2O_8$ give II, though the yield is very small. When 2 g. I, 30 cc. H_2O, 5 cc. 2 N HCl and 1 cc. H_2O_2 are heated 25 min. (solution), and the solution is filtered and concentrated on the H_2O bath, there results 52% III. This is a very suitable method for its preparation A decrease in the amount of HCl causes a decided decrease in the yield. $KMnO_4$ equivalent to 1 atom O, acting on 3 g. uric acid 4,5-glycol in dilute AcOH at 0° for 2-3 weeks, gave 0.9 g. IV; at 100° this yield is decreased to 0.4 g. Since the reaction proceeds so slowly, this glycol is excluded as an intermediate product in the formation of IV from I. The 9-Me derivative under the same conditons gave only a few cg. of methyloxaluric acid. The 7,9-Me_2 derivative gave a very small and variable yield of dimethylparabanic acid. II is oxidized to IV in AcOH, $KMnO_4$ giving a 47 and H_2O_2 a 61% yield. The latter method (2 g. II.H_2O and 4 cc. perhydrol 10 min. on the H_2O bath) is a very suitable method for preparing small amts. of the free acid of IV. IV is also obtained in about 60% yields by oxidation in AcOH (2 days at room, 15 min. at boiling temperature), the mother liquor containing a corresponding amount of V. These products are not the intermediate product in the formation of IV from I, because their oxidation proceeds too slowly. The hypothetical hydroxyacetylenediureincarboxylic acid [present in the alkaline oxidation of I by $KMnO_4$ (1 atom)] on oxidation with a second atom of O in AcOH, however, yields 46% IV and 30% V, and some VI. IV contains 1 mol. H_2O which is completely removed only at 120°. The free acid (VII) is best obtained by dissolving 2.5 g. IV in 25 cc. boiling H_2O, cooling to 75°, acidifying with 5 cc. concentrated HCl and cooling in ice H_2O, the yield being 85%. It decomps. 208-10°; at 95° water dissolves 2.6%; because of its instability, the loss on crystallization from H_2O is about 35%. The NH_4 salt is prepared by rubbing finely pulverized VII with half-concentrated NH_4OH, filtering, washing with a little cold H_2O and crystallizing from 4 parts boiling H_2O; it decomps. 242-4°. Me oxalurate, m. 192° (decomposition), from VII and CH_2N_2; solubility in AcOH,

about 3%. It is more stable towards H2O than VII, can be saponified by AcOK but is decomposed by KOH. The methylamide (VIII), decomposing 251-3°, results from the Me ester and MeNH2 or by the oxidation of 1,3-dimethyluric acid. VII is decomposed by acids or alkalies, giving CO(NH2)2 and (CO2H)2. Three g. VII in 11 cc. H2O boiled 15 min., give 1 g. C2H2O4.2CO(NH2)2 and 0.5 g. C2HO4.NH4.C2H2O4.2H2O under other conditions a mixture of these, m. 130-75°, results. On mixing mol. amts. of C2H2O4 and CO(NH2)2 there ppts. C2H2O4.2CO(NH2)2, also obtained after short heating, but if the boiling is continued 2 hrs. there results C2O4(NH4)2.H2O. Attempts to prepare Lubavin's urea oxalate (Ann., Suppl. 8, 83) failed and it is probable that the compound does not exist. Oxidation of 1,3-dimethyluric acid with alkaline KMnO4 gives a little IV and some dimethyloxamide (IX). Oxidation with alkaline KMnO4 (1 atom O) followed by the addition of AcOH and a 2nd atom O gave from 10 g. acid, 1.3 g. IV, 0.4 g. dimethylparabanic acid and 0.3 g. IX. There was also found 0.15-0.2 g. VIII. The yield of oxidation products with AcOH was very small. Oxidation with H2O2 in alkaline solution gave a new product, needles, m. 215°. Oxidation of 10 g. 3,7-dimethyluric acid in alkaline medium with 1 atom of O gave 0.06 g. 1,8-dimethylallantoin, and an acid, C6H5O5N3, long prisms, m. 212° (decomposition), the K salt of which forms thick rhombic plates and gradually decomps. above 275°. Oxidation of I with Cl in the presence of AcONa does not give II, nor could any definite product be isolated. If the oxidation of the uric acids to alloxans proceeds through the glycols, then the latter in the presence of mineral acids should yield the corresponding alloxans. This is not the case (the 1,3-Me2 derivative is an exception). Chloro- or hydroxypseudouric acid is easily transformed into II in acid solution The "chloraluric acid" of Schiel (Ann. 112, 78) consists of a mixture of NH4Cl and III. Attempts to repeat the work of Gibbs (Ber. 2, 341) on the preparation of "stryphnic acid" by the action of KNO2 and mineral acids on I gave allantoin, VII, and (CO2H)2, but his acid was not observed. Similarly the work of Sokoloff (Z. fur Chemical 5, 78(1869)), who claims the preparation of "urinilic acid" could not be duplicated. NO does not react upon a mixture of I and H2O. The use of a mixture of NO and NO2 (less NO2) gives a mixture of uric acid glycol, III and a little II. A mixture rich in NO2 gives xanthine, II, III and a little C2H2O4.

IT 530084-26-5P, Oxaluric acid, methyl ester
RL: PREP (Preparation)
(preparation of)

RN 530084-26-5 CAPLUS

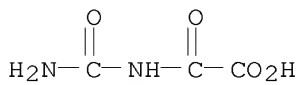
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo-, methyl ester (CA INDEX NAME)



L6 ANSWER 97 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1921:8150 CAPLUS
DOCUMENT NUMBER: 15:8150
ORIGINAL REFERENCE NO.: 15:1546g-i
TITLE: The determination of oxalic acid and oxaluric acid in urine and feces
AUTHOR(S): Bau, A.
SOURCE: Biochemische Zeitschrift (1921), 114, 221-57
CODEN: BIZEA2; ISSN: 0366-0753
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable
AB A reagent for the determination of oxalic acid in urine is prepared as follows: (a) a mixture of 330 g. of Na acetate and 300 cc. H2O is warmed to solution, cooled and filtered if necessary. (b) 25 g. of crystallized CaCl2 is dissolved in 50% AcOH, put into a 500-cc. graduated flask and filled to the mark with (a). This solution is allowed to stand at 7° for 48 hrs. and is then filtered through a hard S. & S. filter. For the analysis of urine, a measured amount of the filtered specimen is taken, 1/6 its volume of the reagent is added and the whole is allowed to stand for 38 to 44 hrs. in the cold. The precipitate is filtered, washed, ashed, heated to whiteness, weighed and titrated with 0.1 N HCl. The presence of glucose or albumin in the urine does not interfere with the accuracy of the determination Oxaluric acid is not precipitated by the reagent. This latter compound is determined by 1st changing it to oxalic acid by boiling with HCl and following the procedure outlined above. The determination of oxalic or oxaluric acid in feces is preceded by defatting, and drying, after which a satisfactory extraction can be made with HCl. This extract is neutralized with NH4OH, buffered with a neutral solution of NH4 citrate and the determination of oxalic acid is carried out as indicated.
IT 585-05-7, Oxaluric acid
(determination in urine and feces)
RN 585-05-7 CAPLUS
CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



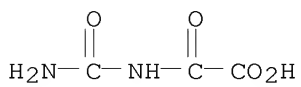
L6 ANSWER 98 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1906:64302 CAPLUS
DOCUMENT NUMBER: 0:64302
TITLE: A reagent for the identification of urea and certain other nitrogen compounds
AUTHOR(S): Fenton, Henry J. Horstman
SOURCE: Journal of the Chemical Society, Transactions (1903), 83, 187-190
CODEN: JCHTA3; ISSN: 0368-1645
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A considerable number of new derivatives of methylfurfural have been described. The starting point for the preparation of these compounds is the bromo-derivative, O:CH·C4H2O·CH2Br, or the corresponding chloro-derivative. These compounds are easily obtained by the action of the dry halogen acids on ketohexoses or on cellulose. Among the various compounds obtained from these derivatives, a condensation product was described with the formula C11H3O4. If the reagent be ground together with urea and the mixture treated with phosphorus oxychloride, acetyl chloride, or dry hydrogen chloride, a Prussian blue color was developed. In using the reaction as a test for urea, the solids are well mixed together, or if the substance to be examined is in solution, it is mixed with an alcoholic solution of the reagent and evaporated to dryness on the water-bath. The phosphorus oxychloride might be dissolved in an appropriate solvent, e.g., light petroleum, glacial acetic acid, or benzene. Preliminary analysis of the urea base indicated that it is formed by condensation of one molecule of the reagent C11H8O4 with two molecules of urea, and if the other bases are similarly constituted, this

fact accounts for the necessity of the NH2 group in the reacting nitrogen compound.

IT 585-05-7, Oxaluric acid
(reagent for identification of urea and certain other nitrogen compounds)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 99 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1906:62899 CAPLUS

DOCUMENT NUMBER: 0:62899

TITLE: The action of phenylhydrazine on urea and some of its derivatives

AUTHOR(S): Skinner, Sidney; Ruhemann, S.

CORPORATE SOURCE: University Laboratory, Cambridge, Cambridge

SOURCE: Journal of the Chemical Society, Transactions (1888), 53, 550-558
CODEN: JCHTA3; ISSN: 0368-1645

DOCUMENT TYPE: Journal

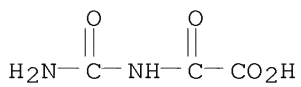
LANGUAGE: Unavailable

AB The compound diphenylcarbazide is produced when mixture of phenylhydrazine and ethylic carbamate is heated over a small flame. Heating equivalent quantities of monophenylcarbamide and phenylhydrazine and phenylhydrazine and monophenylthiocarbamide produced the substance diphenylsemicarbazide and phenylsemithiocarbazide, respectively. If a drop of dilute copper sulphate solution is added to a solution of any of these carbazides or semicarbazides, and intense coloration is produced. Biuret and phenylhydrazine, when heated, produced phenyurazole. An aqueous solution of mercuric chloride added to an alcoholic solution of the diphenylcarbazide gives diphenylcarbazide mercurochloride. A solution of phenylhydrazine hydrochloride has no action on a solution of parabanic acid, but on adding sodium acetate to this mixture, phenylhydrazine parabanate is produced. Oxalurhydrazide is produced when phenylhydrazide parabanate boiled with a very large excess of water is cooled. The reaction between alloxan in aqueous solution and phenylhydrazine hydrochloride in the presence of sodium acetate resulted to phenylhydrazine-alloxan. Phenyl-piperyl-thiocarbamide is a crystalline substance prepared by adding isothiocyanate to piperidine.

IT 585-05-7, Oxaluric acid
(action of phenylhydrazine on urea and its derivatives)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)



L6 ANSWER 100 OF 100 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1906:48874 CAPLUS

DOCUMENT NUMBER: 0:48874

TITLE: The normal urine

AUTHOR(S): Platt, Charles

CORPORATE SOURCE: Chemical Laboratory, Hahnemann Medical College, Philadelphia

SOURCE: Journal of the American Chemical Society (1897), 19(5), 382-4

CODEN: JACSAT
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The various compilations existing as "Text-books of Urine Analysis" differ materially in their statements as to the average composition of a normal urine. Great variations have been found in the original figures, due not so much to errors of determination as to failure to secure representative samples for analysis. Normals determined for one nationality, or for one class of one nationality, are commonly applied indiscriminately to all without regard to fundamental differences in conditions. In view of this laxity in text-book statement, careful records of all urine analyses have been made with due attention to the age, sex, and health of the individuals supplying the samples. These figures are provided.

IT 585-05-7, Oxaluric acid
(study of normal urine analysis)

RN 585-05-7 CAPLUS

CN Acetic acid, 2-[(aminocarbonyl)amino]-2-oxo- (CA INDEX NAME)